

The Gazette



of India

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NOTICE

The undermentioned Gazettes of India Extraordinary were published upto 8th August 1953:—

Sr. No.	No. and date	Issued by	Subject
203	S. R. O. 1513, dated the 21st July 1953.	Election Commission, India.	Election Petition No. 91 of 1952.
	S. R. O. 1514, dated the 21st July 1953.	Ditto.	Election Petition No. 103 of 1952.
	S. R. O. 1515, dated the 21st July 1953.	Ditto.	Election Petition No. 183 of 1952.
203-A	S. R. O. 1515-A, dated the 4th August 1953.	Ministry of Communications.	Amendment made in the Notification of the Ministry of Communications No. 9-CAG (18)/53, dated the 12th June 1953.
204	S. R. O. 1516, dated the 22nd July 1953.	Election Commission, India.	Election Petition No. 1 of 1952.
205	S. R. O. 1517, dated the 23rd July 1953.	Ditto.	Election Petition No. 273 of 1952.
206	S. R. O. 1545, dated the 7th August 1953.	Ministry of Food and Agriculture.	Rescission of the Order published in S. R. O. 1823, dated the 30th October 1952.
207	S. R. O. 1546, dated the 8th August 1953.	Ministry of Finance (Revenue Division).	Exemption of cotton seed oil imported into India from certain customs duty.
208	S. R. O. 1547, dated the 25th July 1953.	Election Commission, India.	Election Petition No. 81 of 1952.

Copies of the Gazettes Extraordinary mentioned above will be supplied on order to the Manager of Publications, Civil Lines, Delhi. Orders should be submitted so as to reach the Manager within ten days of the date of issue of these Gazettes.

PART II—Section 3**Statutory Rules and Orders Issued by the Ministries of the Government of India (other than the Ministry of Defence) and Central Authorities (other than the Chief Commissioners).****MINISTRY OF HOME AFFAIRS****ORDER***New Delhi, the 3rd August 1953*

S.R.O. 1550.—In exercise of the powers conferred by section 6 of the Registration of Foreigners Act, 1939 (XVI of 1939), the Central Government hereby directs that the following further amendment shall be made in the Registration of Foreigners (Exemption) Order, 1949, namely:—

After clause (g) of paragraph 3 of the said Order, the following clause shall be inserted, namely:—

“(gg) any official of the Government of Burma proceeding to India on duty who holds a ‘Special Passport’ issued by that Government or by a duly authorised Representative of that Government and bearing an ‘official’ visa valid for entry into India.”

[No. 6/72/52-F.I.]

FATEH SINGH, Dy. S

MINISTRY OF STATES**ORDER***New Delhi, the 10th August 1953*

S.R.O. 1551.—In exercise of the powers conferred by paragraph 5, of the Kutch (Council of Advisers) Order, 1952 and of all other powers enabling him in that behalf, the President is pleased to make the following Order, namely:—

1. (1) This Order may be called the Advisers (Kutch) (Salaries and Allowances) (Amendment) Order, 1953.

(2) It shall come into force at once.

2. For paragraph 6 of the Advisers (Kutch) (Salaries and Allowances) Order, 1952, the following shall be substituted, namely:—

“6. *Travelling allowance.*—Subject to the foregoing provisions, the conditions of service of an Adviser shall, in respect of travelling and daily allowances, and facilities for travel on duty, be determined by the rules for the time being applicable to a Central Government Servant of the First Grade;

Provided that each Adviser shall be entitled to draw daily allowance at the maximum rates applicable to such a Government Servant;

Provided further that an Adviser shall not be entitled to any travelling or daily allowance in respect of a journey performed by road within 10 miles radius of Bhuj.”

[No. 152-PA.]

G. SWAMINATHAN, Joint S

RESERVE BANK OF INDIA**(Central Office)***Bombay, the 30th July 1953*

S.R.O. 1552.—In pursuance of sub-section (1) of section 5 of the Foreign Exchange Regulation Act, 1947 (VII of 1947), and in supersession of the notification of the Reserve Bank of India No. F.E.R.A. 24/47-R.B., dated the 8th Ju4

1947, the Reserve Bank hereby directs that the prohibition imposed by clause (a) of that sub-section shall not apply to the making of any payment to or for the credit of any person resident outside India out of funds held—

(a) in an account expressed in the currency of any country or territory outside India for the time being specified in the Schedule annexed to this notification:

Provided that:—

(i) in the case of an account expressed in currency other than that of Pakistan such account was in existence prior to the 8th day of July, 1947;

(ii) in the case of an account expressed in the currency of Pakistan, such account was in existence prior to the 27th day of February, 1951; or

(b) in an account maintained in accordance with the provisions of the Notification No. F.E.R.A.23/47-RB, dated the 8th July, 1947.

SCHEDULE

Any country within the Commonwealth (except Canada),
The Irish Republic,
British Trust Territories,
British Protectorates and Protected States,
Burma,
Iraq,
Iceland,
The Hashemite Kingdom of the Jordan,
Libya.

[No. F.E.R.A.119/53-RB.]

S.R.O. 1553.—In pursuance of sub-section (1) of section 4 of the Foreign Exchange Regulation Act, 1947 (VII of 1947), the Reserve Bank hereby directs that its notification No. F.E.R.A. 22/47-RB, dated the 8th July, 1947, shall stand cancelled forthwith.

[No. F.E.R.A.120/53-RB.]

B. RAMA RAU, Governor.

MINISTRY OF FINANCE

(Department of Economic Affairs)

New Delhi, the 10th August 1953

S.R.O. 1554.—In exercise of the powers conferred by section 53 of the Banking Companies Act, 1949 (X of 1949), the Central Government, on the recommendation of the Reserve Bank of India, hereby declares that the provision of section 11 of the said Act shall not apply to the Bengal Credit Bank Ltd., Calcutta, for a period upto and including the 15th March, 1954.

[No. F.4(129)-F.I/53.]

N. C. SEN GUPTA, Dy. Secy.

MINISTRY OF FINANCE (REVENUE DIVISION)

CENTRAL EXCISES

New Delhi, the 8th August, 1953

S.R.O. 1555.—In exercise of the powers conferred by section 37 of the Central Excises and Salt Act, 1944 (I of 1944), the Central Government hereby directs that the following further amendment shall be made in the Central Excise Rules, 1944, namely:—

For Rule 14-A of the said Rules, the following rule shall be substituted, namely:—

“Rule 14-A. *Penalty for failure to furnish proof of export within the prescribed period.*—Where any person who has removed excisable goods for export in bond in accordance with the provisions of rule 13 or 14, fails to export or to furnish proof of such export to the satisfaction of the Collector in the manner laid down in any notification issued under rule 12, he shall, upon a written demand being made

by the proper officer, forthwith pay the duty leviable on such goods, and shall also be liable to a penalty which may, subject to a maximum of two thousand rupees, extend to twice the amount of the duty, and until such duty and penalty are paid, the Collector may in his discretion refuse to permit such person to make further exports of excisable goods in bond:

Provided that nothing hereinbefore contained shall apply—

- (a) to persons who have, after removal but before the export of goods, cleared the goods for home consumption in the manner provided in rule 52 or rule 157, as the case may be, or
- (b) in respect of any unmanufactured products to which the provisions of Chapter VII have been extended and which, with the prior permission of the proper officer, have been rewarehoused in accordance with the provisions of these rules, or
- (c) to persons who have otherwise accounted for such goods to the satisfaction of the Collector."

[No. 19.]

M. P. ALEXANDER, Under Secy.

CENTRAL BOARD OF REVENUE

INCOME-TAX

New Delhi, the 10th August 1953

S.R.O. 1556.—In exercise of the powers conferred by sub-section (6) of Section 5 of the Indian Income-tax Act, 1922 (XI of 1922), the Central Board of Revenue hereby directs that the following further amendments shall be made in its notification No. S.R.O. 1214 (No. 44-Income-tax), dated the 1st July, 1952, namely:—

In the schedule to the said notification after item No. 78, the following item and connected entries shall be added, namely:—

1	2	3	4	5	6
"79.	Persons with their registered offices situated in Milano, Italy, who had had or have had a contract with the Government of Madras for the supply and erection of the Vishakapatnam-Peddapuram and Tenubodduvara-Nellimarla sections of the Machkund 132, K. V. Lines.	Income-tax Officer, City Circle II, Madras.	Inspecting Assistant Commissioner of Income-tax, Central Range, Madras.	Appellate Assistant Commissioner of Income tax, 'C' Range, Madras.	Commissioner of Income-tax, Madras."

[No. 53.]

New Delhi, the 14th August 1953

S.R.O. 1557.—In pursuance of sub-section (4) of section 5 of the Indian Income-tax Act, 1922 (XI of 1922), the Central Board of Revenue directs that the following further amendment shall be made in the schedule appended to its notification No. 32-I.T., dated the 9th November, 1946, namely:—

In the said schedule under sub-head 'III-B Bombay South',—

- (i) against Poona Range the entry "(2) Thana" shall be deleted, and entry (3) shall be renumbered as entry (2);
- (ii) against Kolhapur Range the entry "8 Thana" shall be added.

[No. 54.]

K. B. DEB, Under Secy.

MINISTRY OF RAILWAYS

(Railway Board)

New Delhi, the 30th June, 1953

S.R.O. 1558.—In pursuance of rule 29 of the Vizagapatam Harbour Craft Rules, 1950, the Central Government hereby prescribes the following regulations for the grant of Certificates of competency or permits to Masters and Syrang, Engineers and Engine Drivers of mechanically propelled craft plying in the Port of Vizagapatam (not being craft coming into port from any system of inland navigation).

I. REGULATIONS FOR THE GRANT OF CERTIFICATES OF COMPETENCY TO MASTERS AND SYRANG'S OF MECHANICALLY PROPELLED CRAFT PLYING IN THE PORT OF VIZAGAPATAM.

1. In these regulations, unless there is anything repugnant in the subject or context—

(a) "First-class master's certificate" means a Certificate of Competency granted under these regulations to a person to be master of a steam-vessel having engines of any nominal horse-power or of a motor-vessel having engines of any brake horse-power, plying in the port of Vizagapatam.

(b) "Second-class master's certificate" means a Certificate of Competency granted under these regulations to a person to be master of a steam-vessel having engines of less than 100 nominal horse-power, or of a motor-vessel having engines of less than 565 brake horsepower plying in the Port of Vizagapatam.

(c) "Syrang's certificate" means a Certificate of Competency granted under these regulations to a person to be master of a steam-vessel having engines of less than 40 nominal horsepower, or of a motor-vessel having engines of less than 226 brake horsepower, plying in the Port of Vizagapatam.

2. CERTIFICATES OF COMPETENCY shall be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose arrangements shall be made for holding examinations periodically at the Port of Vizagapatam.

3. The examination shall be held by the Principal Officer Mercantile Marine Department, Madras District, or by such officer as may be appointed by him in this behalf hereinafter called the examiner. They shall commence early in the forenoon, and shall be continued from day to day until all the candidates whose names appear upon the examiner's list on the day of examination are examined.

4. Candidates for examination must make their applications upon the appropriate form (Exn. 2b) which must be filled up before the examiner or such official as may be appointed by him in this behalf. The form properly filled in, together with the candidates' testimonials and discharges, must be lodged with the examiner not later than the day before the day of examination.

5. Testimonials of character and of sobriety, experience, ability and good conduct on boardship for at least the last twelve months service preceding the date of application to be examined shall be required from all applicants. Applicants who have not served on boardship within the last twelve months shall be required to produce in addition to the preceding testimonials, certificates of a like nature from their employers, or, if unemployed from some respectable house-holder. No candidate shall be allowed to be examined unless he has served on boardship at sea or on inland waters two years within the last six years, and six months within the last three years preceding the date of his application to be examined.

6. The testimonials of service of foreigners and of British seamen serving in foreign vessels, which cannot be verified by the examiner must be confirmed either by the Consul of the country to which the vessel in which the candidate served belonged, or by some other recognized official authority of that country or by the testimony of some credible person on the spot having personal knowledge of the facts required to be established. The production, however, of such proofs shall not of necessity be deemed sufficient. Each case must be decided on its own merits; and if the sufficiency of the proofs given appears to be at all doubtful the point must be referred to the Central Government.

7. Testimonials of service of candidates must ordinarily be based on their employer's office-records.

Service claimed which cannot be verified from the employer's office-records must be authenticated by affidavits of men under whom such services have been performed as well as by an affidavit of the candidate himself.

8. Should any doubt exist as to the age of a candidate, he shall be required to produce a certificate of birth or baptism, or other documentary proof of age, to the satisfaction of the examiner.

9. Foreigners must prove to the satisfaction of the examiner that they can speak and write the English language and speak Hindustani or any of the local languages sufficiently well to perform the duties required of them on board an Indian vessel.

In the case of Indians who may not be able to speak English, their certificates shall be endorsed to the effect that they are valid only for vessels manned and officered entirely by persons who can speak Hindustani or any of the local languages. This endorsement may be dispensed with if the examination is conducted wholly in English.

10. *Sight Test*.—Any persons, including the holders of Certificates of Competency granted under these rules, or persons about to apply for Certificates of Competency under these rules, if desirous of being examined in colours only, must make application to the examiner in Form Exn. 2A, and pay a fee of one rupee.

11. No candidate shall be examined in colours until he has passed the letter test.

This rule must be observed whether the candidate has or has not on any previous occasion passed the letter test.

12. Candidates who fail to pass the letter test can be re-examined at intervals of three months.

13. If a candidate fails in colours, it shall be open to him to be examined again on three occasions only at intervals of three months. A fresh fee must be paid on each occasion.

14. A candidate who holds a certificate of Competency granted under these rules, and, who on presenting himself for examination for a certificate of a higher grade, is unable to pass the colour test, shall notwithstanding be permitted to proceed with the examination for the certificates of the higher grade.

15. Should he pass this examination, the following statement shall be written on the face of the higher grade certificate which may be granted to him, viz., "This officer has failed to pass the examination in colours".

16. Should he ultimately fail to pass the examination, a like statement, relating to his being colour-blind, shall be made by the examiner on his existing certificate before it is returned to him.

17. Holders of certificates which bear the statement of their having failed to pass in colours, and who may desire to have the statement removed from their certificates must obtain the special permission of the Central Government.

Qualifications for Syrang's certificates

18. All candidates for Syrang's certificates must be examined in the letter and colour tests.

19. A candidate for a Syrang's certificate must be not less than twenty-one years of age and must produce satisfactory certificates of sobriety and intelligence. He must have served four years at sea or on inland waters, the last year of which service must have been on an inland or Harbour steam or motor vessel as either a helmsman or a deckhand, and shall be examined viva voce as to his knowledge in the following subjects:—

- (1) the rules of the road;
- (2) simple questions on the handling and management of harbour launches;
- (3) the storm signals;
- (4) the port rules and knowledge of buoys, lights, land-marks, channels, sands, and set of tide in the Port of Vizagapatam and its approaches.

20. If a candidate fails, he shall not be re-examined until he has rendered additional service for three months on an inland or harbour steam or motor vessel as a helmsman or as deckhand.

Qualifications for Second-class master's certificate

21. All candidates for Second-class master's certificate must first be examined in sight and colour.

22. A candidate for a Second-class master's certificate must be not less than twenty-two years of age, and must produce certificates of sobriety and intelligence.

He must have served at least five years at sea or on inland waters, the last three years of which service must have been as helmsman (sukhani) or deckhand of an inland or harbour steam vessel of not less than 40 nominal horsepower or a motor vessel of not less than 226 brake horsepower or an alternative service of three years as syrang in charge of a steam launch of over 15 nominal horsepower or a motor launch of over 80 brake horsepower holding a certificate of competency granted under the Inland Steam-vessels Act, 1917 (I of 1917), or under Ceylon Ordinance No. II of 1907 for tindals or under these regulations, and shall pass a satisfactory VIVA VOCE examination in the following subjects:—

- (1) the rules of the road;
- (2) the management of small steam and motor vessels under all contingencies;
- (3) storm-signals;
- (4) tide tables;
- (5) the Port Rules of the Port of Vizagapatam;
- (6) knowledge of buoys, lights, landmarks, channels, sands, and set of tides in the Port of Vizagapatam and its approaches;
- (7) compass (The candidate should be able to read the points of the compass).

If a candidate fails, he shall not be re-examined till he has rendered additional service for three months as a syrang holding a syrang's certificate granted under the Inland Steam-vessels Act, 1917 (I of 1917), or under these rules, or as helmsman (sukhani) or deckhand of an inland or harbour steam-vessel of not less than 40 nominal horsepower or a motor-vessel of not less than 226 brake horsepower.

Qualifications for First-class master's certificate

24. All candidates for First-class master's certificates must first be examined in the letter and colour tests.

25. A candidate for a first-class master's certificate—

(1) must be not less than 24 years of age, and must have served as second-class master in charge of an inland steam or motor-vessel for not less than three years, or while possessing a second-class master's certificate granted under the Inland Steam-vessel Act, 1917 (I of 1917), or under these regulations, or while possessing the certificate as Mate granted under Ceylon Ordinance have served as second syrang of a steam or motor-vessel for not less than four years, or

(2) must be not less than 22 years of age and hold a certificate of competency as second mate, Foreign-going or Mate Home Trade, granted under the Indian Merchant Shipping Act, 1923 (XXI of 1923), or the Merchant Shipping Act 1894 (57 and 58 Vict. G. 60), and subsequent enactments or a certificate to which the provisions of any such Act have been made applicable under the Merchant Shipping (Colonial) Act, 1869, and have served as a mate of an inland steam or motor-vessel or master of a river flat for not less than one year, or

(3) must be not less than 24 years of age and must have served either, not less than three years at sea and three years as mate of an inland steam or motor-vessel or master of a river flat; or not less than six years as a mate of an inland steam or motor-vessel or master of a river flat.

26. Each candidate shall be examined apart, and VIVA VOCE in each and all of the following subjects:—

- (1) the rules of the road;
- (2) the management of any type of harbour or inland steam or motor-vessel under all contingencies including the handling of tugs;
- (3) tide tables;
- (4) storm-signals;
- (5) a thorough knowledge of the Vizagapatam Port Rules;
- (6) knowledge of buoys, lights, landmarks, channels, sands and set of tide in the Port of Vizagapatam and its approaches; and

(7) an elementary knowledge of the compass.

27. If a candidate fails, he shall not be re-examined until he has rendered additional service for three months either as second-class master in charge of an inland or harbour steam or motor-vessel as mate or second in charge of an inland or harbour steam or motor-vessel or as master of a river flat.

Failure

28. Notwithstanding anything contained in these regulations any candidate in an examination for a First or Second-class master's certificate shall be examined in the subject mentioned in clauses (5) and (6) of rule 22, or clauses (5) and (6) of rule 26 as the case may be, and if he satisfies the examiner as to his knowledge of the prescribed subject and generally as to his competency to be in charge of a steam or motor-vessel he shall be granted a certificate of competency under these rules.

29. (1) If a candidate has failed in his examination, but the subjects in which he has failed are not included in the subjects required for a certificate of a lower grade, he may, if he desires it receive a certificate of such lower grade.

(2) If a candidate fails in the subjects mentioned in clause (4) of rule 19 only, but otherwise passes a satisfactory examination, he shall be granted a Certificate of Competency under these rules.

30. When a Certificate of lower grade is granted to a candidate as provided in rule 29 no part of any fee paid by him shall be returned to him, and on presenting himself, when entitled so to do, for re-examination for the higher grade of certificate, he shall be required to pay again the full fee.

Fees

31. Candidates for examination in making their application on Form Exn. 2b shall be required to pay the examination fee before any step is taken, whether by inquiring into their services or testing their qualifications or by following any other course prescribed by these rules. Should it be found that their services are not sufficient to entitle them to be examined, or should their testimonials be unsatisfactory, or should they, from any other cause, not be examined, no part of the fee shall be returned to them, but when they have fulfilled the requisite service or are able to produce satisfactory testimonials, as the case may be, they shall be allowed to again present themselves for examination for a certificate of the same grade without paying any further fee.

The fee for examination must be paid to the examiner or such officer duly authorised by him in this behalf.

32. If a candidate fails in his examination, NO PART OF THE FEE SHALL BE RETURNED TO HIM.

33. If the candidate satisfies the examiner, as to his knowledge of the prescribed subjects, and generally as to his competency to command a steam or motor vessel plying in the Port of Vizagapatam the examiner shall grant a certificate to the candidate.

34. The fees are as follows:—

First-class master's certificate	..	..	..	..	16
Second-class master's certificate	...	...	...	...	6
Syrang's certificate	...	...	...	...	4

Attempted bribery

35. If a candidate offers a gratuity to any officer, he will be regarded as having committed an act of misconduct and will be rejected. He will not be allowed to be examined again until a period of at least 12 months has elapsed.

General

36. First and second-class master's certificates and syrang's certificates shall be made and issued in the forms hereto annexed.

37. Every such certificate shall be made in duplicate and every person entitled to such certificate shall supply the examiner with two copies of his photograph passport size, one of which shall be affixed on each of the copies of the certificate. One copy of the certificate shall be delivered to the person entitled to the certificate, and the other shall be kept and recorded by the examiner.

Certificate of Competency as Syrang of a steam-vessel having engines of less than 40 nominal horsepower, or of a motor-vessel having engines of less than 226 brake horse-power, plying in the Port of Vizagapatam.

To.

Whereas you have been found, after examination, duly qualified to fulfil the duties of Syrang of a Steam-vessel having engines of less than 40 nominal horsepower, or of a motor-vessel having engines of less than 226 brake horsepower, plying in the Port of Vizagapatam I do hereby grant you this **CERTIFICATE OF COMPETENCY** as such Syrang, to ply in the said port.

Given under my hand and seal

Principal Officer, Mercantile Marine
Department, Madras District.

This _____ day of _____

No. of Certificate _____

Bearer _____ son of _____ by caste _____

Date* and place of birth, showing village, thana and district. _____

Residence, showing village, thana and district. _____

Height. _____

Personal descriptions, stating particularly any permanent marks or scars. _____

Number of Register Ticket _____

Signature _____

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Principal Officer, Mercantile Marine Department, Madras District, Madras.

Issued at _____ on the _____
day of _____ 19 _____

Registered

Principal Officer, Mercantile Marine
Department, Madras District.

*If not known exactly, must be stated on the best information or evidence available.

NOTE 1.—This certificate is valid only for steam-vessels manned and officered entirely by persons who can speak Hindustani or any of the local languages.

N.B.—The above note should be struck out when the certificate is granted to an English-knowing candidate.

Certificate of competency as master of a steam-vessel having engines of less than 100 nominal horsepower or of a motor-vessel having engines of less than 565 brake horse-power plying in the port of Vizagapatam.

To

Whereas you have been found, after examining, duly qualified to fulfil the duties of master of a steam-vessel having engines of less than 100 nominal horsepower, or of a motor-vessel having engines of less than 565 brake horsepower, plying in the Port of Vizagapatam, I do hereby grant you this **CERTIFICATE OF COMPETENCY** as such master, to ply in the said port.

Given under my hand and seal.

Principal Officer, Mercantile
Marine Department, Madras District

This _____ day of _____

No. of Certificate _____

Bearer _____ son of _____ by caste _____

Date* and place of birth, showing village, thana and District _____

Residence, showing village, thana and district _____

Height _____

Personal description, stating particularly any permanent marks or scars. _____

Number of Register Ticket _____

Signature _____

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Principal Officer, Mercantile Marine Department, Madras District, Madras.

Issued at
day of

19

on the

Registered

Principal Officer, Mercantile Marine
Department, Madras District

*If not known exactly, must be stated on the best information or evidence available.

NOTE 1.—This certificate is valid only for steam-vessels manned and officered entirely by persons who can speak Hindustani or any of the local languages.

N.B.—The above note should be struck out when the certificate is granted to an English-knowing candidate.

Certificate of competency as master of a steam-vessel having engines of any nominal horsepower or of a motor-vessel having engines of any brake horsepower, plying in the Vizagapatam Port.

To

Whereas you have been found, after examination duly qualified to fulfil the duties of master of a steam-vessel having engines of any nominal horsepower, or of a motor-vessel having engines of any brake horsepower, plying in the Port of Vizagapatam I do hereby grant you this certificate of Competency as such master.

Given under my hand and seal

Principal Officer, Mercantile Marine
Department, Madras District.

This

day of

19

No. of Certificate.

Address of owner.

Date and place of Birth.

Signature.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Principal Officer, Mercantile Marine Department, Madras District, Madras.

Issued at

on the

day of

19

Registered.

Principal Officer, Mercantile Marine
Department, Madras District.

Exn. 2-B

Application to be examined for a certificate to act as master or syrang of a steam-vessel having engines of $\left\{ \begin{array}{l} \text{any nominal horsepower} \\ \text{less than 100 nominal horsepower} \\ \text{less than 40 nominal horsepower} \end{array} \right\} \left\{ \begin{array}{l} \text{or of a} \\ \text{motor-vessel} \\ \text{having} \end{array} \right.$

$\left\{ \begin{array}{l} \text{any brake horsepower less than 565 brake horsepower} \\ \text{less than 226 brake horsepower.} \end{array} \right.$

plying in the Port of Vizagapatam.

Before filling in the required particulars the candidate should read carefully the notice and the declaration in Division (1)

(A) Name, etc., of candidate

Name in full	Date and place of birth	Permanent address, stating town, or village, street and number of house and name of person (if any) with whom residing

(B) Particulars of all previous certificates (if any) whether issued in the United Kingdom, the British possessions, or elsewhere

Number	"Competency" "Service or RNR"	Grade	Where issued	Date of issue	If at any time cancelled or suspended state by what Court or authority	Date	Cause

(C) Certificate now required

Grade	Address to which it is to be sent	Date	Port for which the certificate is required	Subject in which the candidate failed

(D) If the candidate has failed in a previous examination for the certificate now required, he must here state when. If he has not failed, he must state so in writing across this division.

(E) Certificate of the Principal Officer, Mercantile Marine Department, Madras District.

The Declaration (I) was signed in my presence/of _____ and the
fee of Rs. _____ received by me

Dated at _____ the _____ day of _____ 19 _____

Principal Officer, Mercantile Marine
Department, Madras District.

[illegible]

Height		Complexion	Colour of		Personal mark or peculiarities if any
Feet	Inches		Hair	Eyes	

18

(The testimonials to be numbered consecutively according to the number given in the first column of the statement below).

[illegible]

TOTAL SERVICE

Time served for which official proof is now produced.

Time served for which no proof is produced.

I. DECLARATION TO BE MADE BY THE CANDIDATE

(NOTICE.—Any person who makes, or procures to be made or assists in making, any false representation for the purpose of obtaining for himself or for any other person a certificate of competency is liable to prosecution).

I do hereby declare that particulars contained in Divisions (A), (B), (C), (D) and (H) of this form are correct and true to the best of my knowledge and belief, and that the papers enumerated in Division (H) and sent with this form are true and genuine documents, given and signed by the persons whose names appear on them. I FURTHER DECLARE THAT THE STATEMENT (H) CONTAINS A TRUE AND CORRECT ACCOUNT OF THE WHOLE OF MY SERVICES WITHOUT EXCEPTION.

And I make this declaration conscientiously believing the same to be true.

Dated at the day of 19 .

Signed in the presence of the Principal Officer, Mercantile Marine Department, Madras District.

Signature of Candidate.
Present Address.

Exn. 2-A.

Port of Vizagapatam.
Rotation No.

Application to be examined in Sight Tests

(A) Name, etc. of Candidate

1. Christian name at full length.
2. Surname.
3. Permanent address, stating town or village, street and No. of house and name of person (if any) with whom residing
4. Date of birth.
5. Place of birth.
Town or village. Country and/or District.
6. If Candidate has served at sea, state—
(i) No. of years.
(ii) Present rating and No. and Grade of Certificate (if any).
7. If Candidate has not served at sea, state—
(i) If about to go to sea.
(ii) In what capacity.

(B) If Candidate has been previously examined in the Sight Tests, he must here state when and where the last examination took place and insert "Passed", "Failed" or "Not Examined" as the case may be against each subject. If the Candidate holds a Certificate of Competency he should not be examined in Colour Vision and the entry "Not Examined" should be made in Division II.

8. Date.
9. Port.
10. Form of Vision Tests.
Old New.
11. Colour Vision Test.

(C) Declaration to be made by Candidate

I hereby declare that the particulars contained in Division (A) and (B) of this form are correct and true to the best of my knowledge and belief.

And I make this declaration conscientiously believing it to be true.

Dated at this day of 19 .

Signature of Candidate.

(D) *Principal Officer's receipt for fee*

12. Amount received. One rupee.
13. Date of receipt.
14. Place at which received.

The declaration above was signed in my presence and the fee named has been received by me.

Principal Officer, Mercantile Marine
Department, Madras District.

(E) *Certificate of Examiner*

I hereby certify that the Candidate named above was examined by me this day in the Tests for Form and Colour Vision with the following result:—

15. Form Vision Test.

Old*

New*

16. Colour Vision Test*

Examiner.

Port of

This day of
To

19

The Principal Office, Mercantile Marine Department, Madras District.

The Examiner should fill up this form and forward on the day of examination to

Principal Officer, Mercantile Marine Department, Madras District.

*Insert "Passed" or "Not Examined" as the case may be. In Colour Vision, if the Candidate holds a Certificate of Competency, the entry should be "Not Examined".

II. REGULATIONS FOR THE GRANT OF CERTIFICATES OF COMPETENCY TO ENGINEERS AND ENGINE DRIVERS OF MECHANICALLY PROPELLED CRAFT PLYING IN THE PORT OF VIZAGAPATAM.

1. In these regulations, unless there is anything repugnant in the subject or context—

(a) "Engineer's Certificate" means a Certificate of Competency granted under these regulations to a person to be engineer of a steam vessel having engines of any nominal horsepower plying in the Port of Vizagapatam.

(b) "First Class engine-driver's certificate" means a Certificate of Competency granted under these regulations to a person to be engine driver of a steam-vessel having engines of less than 100 nominal horsepower plying in the Port of Vizagapatam.

(c) "Second Class Engine Driver's certificate" means a Certificate of Competency granted under these regulations to a person to be engine driver of a steam-vessel having engines of less than 40 nominal horsepower plying in the Port of Vizagapatam.

(d) "Motor Engineer's Certificate" means a Certificate of Competency granted under these regulations to a person to be Engineer of a motor-vessel having engines of any brake horsepower plying in the Port of Vizagapatam.

(e) "First-class motor engine-driver's certificate" means a Certificate of Competency granted under these regulations to a person to be engine-driver of a motor vessel having engines of less than 565 brake horsepower plying in the Port of Vizagapatam.

(f) "Second-class motor engine-driver's certificate" means a Certificate of Competency granted under these regulations to a person to be engine-driver of a motor vessel having engines of less than 226 brake horsepower plying in the Port of Vizagapatam.

(g) "Principal Officer" means the Principal Officer, Mercantile Marine Department, Madras District.

2. Certificates of Competency shall be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose arrangements shall be made for holding examinations periodically at the Port of Madras.

3. The examination shall be held by the Engineer and Ship Surveyor, Mercantile Marine Department, Madras, hereinafter called the examiner. They shall commence early in the forenoon and shall be continued until all the candidates whose names appear on the list of the Principal Officer on the day of examination are examined.

4. Candidates for examination must make their applications on Form Exn. I (Appendix E) which must be filled in before the Principal Officer or such official as may be appointed by him in this behalf. The form, properly filled in, together with the Candidates testimonials, must be lodged with the Principal Officer not later than three days before the day of examination.

5. Applicants shall be required to produce, in addition to the usual forms of discharge or service record satisfactory testimonials as to sobriety, experience ability and general good conduct for at least the last 12 months' service on board a ship preceding the date of application to be examined unless the Central Government after having investigated the matter shall see fit to reduce the time.

An applicant already possessed of a certificate granted under these rules and wishing to appear for one of a higher grade must produce his certificate and all the discharges or service records and testimonials he submitted when he applied for examination in the lower grade as well as the discharges or service records and testimonials necessary for the higher grade certificate. Should references of doubtful authenticity be submitted by candidates for examination, the Principal Officer may require proof from the candidate of their genuineness or an affidavit made to that effect.

If applicants have served on shore immediately preceding their application, certificates of sobriety must be produced from their employers or from a respectable house-holder if unemployed. No candidate shall be allowed to be examined unless he has served on boardship six months within the last three years preceding the date of his application to be examined.

6. As such testimonials and discharges may have to be verified before the candidates can be examined, it is desirable that these should be handed over, together with the form Exn. I as early as possible.

7. The testimonials of service of foreigners and of British seamen serving in foreign vessels, which cannot be verified in the office of the Principal Officer must be confirmed by the Consul of the Country to which the vessel in which the candidate served belonged, or by some other recognised official authority of that country or by the testimony of some credible person on the spot, having personal knowledge of the facts required to be established. The production, however, of such proofs shall not of necessity be deemed sufficient. Each case must be decided on its own merits; and if the sufficiency of the proofs given appears to be at all doubtful the point must be referred to the Central Government.

8. Should any doubt exist as to the age of a candidate he shall be required to produce a certificate of birth or baptism or other documentary proof of age, to the satisfaction of the Principal Officer.

9. Foreigners must prove to the satisfaction of the examiner that they can speak and write the English language and speak Hindustani or Telegu sufficiently well to perform the duties required for them on board an Indian vessel. In the case of Indian who may not be able to speak English, their certificates shall be endorsed to the effect that they are valid only for vessels manned and officered entirely by or persons who can speak Hindustani or Telegu. This endorsement may be dispensed with if the examination is conducted wholly in English.

10. Testimonials of service of Candidates must ordinarily be based on their employers' office-records.

Services claimed which cannot be verified from the employers' office records must be authenticated by affidavits of men under whom such services have been performed as well as by an affidavit of the candidate himself.

Testimonials of service from Certified Marine Engineers or Mechanical Engineers with comparable qualifications shall be accepted.

11. Candidates shall be required to account for any gaps in their services with documentary evidence.

Qualifications for Second Class Engine-driver's Certificates

12. A candidate for a Second-class engine-driver's certificate must have attained the age of twenty-one years and must possess one of the following qualifications, namely—

(a) He must have served an apprenticeship of at least three years in the making or repairing of steam-engines, and one year in the engine room of a steamer; or

(b) He must have served four years in the engine-room of a steamer at sea, or on inland waters under an Engineer or first-class engine-driver possessing certificates of competency granted under the Inland Steam-vessels Act, 1917 (I of 1917) one year of which service must have been as a syrang tindal or Fireman in charge of a watch in a vessel having engines of not less than twenty nominal horsepower; or

(c) He must have served five years in the engine-room or a steamer, one year of which service must have been as a syrang, tindal, principal fireman or fireman in charge of a watch in a vessel of not less than 15 nominal horsepower under a first-class engine-driver certificated under the Inland Steam Vessels Act, 1917 (I of 1917); or

(d) He must have served two years in charge of the engine of a factory or mill under a appropriately qualified manager or engineer, and one year as engine-room syrang, tindal, or principal fireman in a steamer of not less than 15 nominal horsepower.

NOTE.—For the purpose of rules 12(a), 15(a), 24(a), 29(a) and 31(a) any period six months or more spent at an approved technical school, will count as 2/3 of the same period of workshop service provided the candidate produces a certificate of regular attendance and satisfactory progress from the Principal of the school.

For a list of approved technical schools see Appendix F.

13. He must satisfactorily pass a *viva voce* examination as to the making of marine engines, and boilers and the uses of the different parts and fittings, also as to the use of brine cocks, the salinometer and blowing off, the care of boilers in salt or foul water, and the art of economical stoking and prevention of smoke.

14. He must be able, if required, to show his practical qualifications by actually working the engines of a small steamer, after fulfilling all the other tests to which he will be subjected.

Qualifications for Second-class motor engine-driver's Certificates

15. A candidate for a Second-class motor engine-driver's certificate must have attained the age of twenty one years and must possess one of the following qualifications, namely—

(a) He must have served for not less than three years as an apprentice or journeyman in the making, fitting and/or repairing of internal combustion or marine steam engines and in addition he must have served for six months in the engine room of a motor vessel having engines of not less than 85 brake horsepower or nine months in a vessel with engines of not less than 40 brake horsepower; or

(b) He must have served for a period of not less than four years in the engine room of a motor vessel of not less than 226 brake horsepower, of which period not less than one year must have been served as a syrang, principal tindal or chief greaser:

Provided that of the four years mentioned above one-third may be served in the engine room of a steam vessel of not less than 40 nominal horsepower, or

(c) He must have served for a period of not less than five years in the engine room of a motor vessels having engines of not less than 85 brake horsepower, or six years in the engine room of a vessel having engines of not less than 40 brake horsepower as syrang, tindal or chief greaser:

Provided that of the five and six years' service mentioned above, one-third may be served in the engine-room of a steam vessel of not less than 10 nominal horsepower, or

(d) He must have served for a period of not less than two years in charge of the engines of a factory or mill under a certificated engineer, as well as for a period of not less than one year in the engine-room of a motor-vessel of not less than 85 brake horsepower, or eighteen months in a motor-vessel having engines of not less than 40 brake horsepower, as a syrang, tindal or chief greaser; or

(e) He must have served for at least six months with a Second-class engine driver's certificate for steam vessels granted under the Inland Steam Vessels Act, 1917 (I of 1917) or under these regulations, or with a certificate of a higher grade in the engine room of a motor vessel having engines of not less than 85 brake horsepower or for nine months in a motor vessel having engines of not less than 40 brake horsepower.

(f) He must have served for at least two years, whilst in possession of a permit granted under the Inland Steam Vessels Act (I of 1917) or Vizagapatam Harbour Craft Rules, 1950 as an engine driver of a motor vessel having engines of 40 brake horsepower or under followed by three years' service in the engine-room of a motor vessel having engines of more than 40 brake horsepower as syrang, tindal or chief greaser;

Provided that when the candidate produces proof of long service with such a permit in launches having engines of 40 brake horsepower or under, remission of service with engines of over 40 brake horsepower may be allowed in the ratio of one year lower-powered launches in lieu of six months' service in higher-powered launches with a maximum remission of eighteen months. The service to count for remission must be in excess of the two years required in launches of 40 brake horsepower or under.

16. The candidate must satisfactorily pass a *viva voce* examination on the working of the various types of internal combustion engines and be able to name the principal parts of the machinery.

17. The candidate must know what attention is required by the various parts of the machinery, understand the use and management of the different valves, cocks, pipes and connections; and be familiar with the various methods of supplying air and fuel to the cylinders.

18. The candidate must be able to describe the chief causes which may make the engine difficult to start and to explain how he would proceed to remedy any defects connected therewith; he must also be able to show that he understands the mechanism of the starting and reversing arrangements and that he is competent to deal with defects therein.

19. The candidate must be able to overhaul the engine to adjust the working parts and to put the engine together again in good working condition. He must also understand how to make good the result of ordinary wear and tear to the machinery and how to correct defects from accidents.

20. The candidate must be familiar with the nature and properties of the various fuel oils used in internal combustion engines. He must understand what is meant by "flash point".

21. The candidate must know the danger resulting from leakage from the fuel oil tanks and must understand the precautions to be taken against explosion. He must also be able to take the necessary precautions to guard against the escape of inflammable vapour from the vaporiser when the engines are stopped. He must also know how to deal with fire should it break out.

22. The candidate must also be able, if required, to know his practical knowledge by actually working the engines of a motor vessel in the presence of the examiner.

23. The candidate must possess a working knowledge of the auxiliary steam-boilers and machinery connected therewith, namely, electric light engines, steering engines, evaporators and pumps.

Qualifications for First-Class Engine Driver's Certificate

24. A candidate for a first-class engine driver's certificate must have attained the age of twenty-two years and must possess one of the following qualifications, namely—

(a) He must have served an apprenticeship of at least three years in the making or repairing of steam-engines and one year as Assistant Engineer in a steamer having engines of not less than 80 nominal horsepower whilst holding a second class engine driver's certificate for steam vessels granted under the Inland Steam Vessels Act, 1917 (I of 1917) or under these rules; or

(b) He must have served five years in the engine-room of a steamer at sea or on inland waters, two years of which service must have been as syrang, principal tindal or fireman in charge of a watch in a steamer having compound

surface condensing engines of not less than 30 nominal horsepower whilst holding a second-class engine driver's certificate for steam-vessels granted under the Inland Steam Vessels Act, 1917 (I of 1917) or under these rules; or

(c) He must have served one year as second driver with a second class engine driver's certificate for steam vessels granted under the Inland Steam-vessels Act, 1917 (I of 1917) or under these rules in charge of a watch on the main engines and boilers of a steamer having compound surface condensing engines of not less than 30 nominal horsepower; or

(d) He must have served one year with a second class Engine driver's certificate for steam-vessels granted under the Inland Steam-vessel Act, 1917 (I of 1917) or under these regulations, as driver in charge of the engines of a steamer having compound surface condensing engines of not less than 20 nominal horsepower; or

(e) He must have served eighteen months as syrang or principal tindal with a second class engine driver's certificate for steam-vessels granted under the Inland Steam-vessels Act 1917 (I of 1917) or under these regulations in charge of a watch on the main engine and boilers of a steamer having compound surface condensing engines of not less than 30 nominal horsepower; or

(f) He must have served three years in charge of the engines of a factory or mill under an appropriately qualified Manager or engineer, as well as two years as assistant engineer, engine room syrang or principal tindal of a steamer having engines of not less than 80 nominal horsepower whilst holding a second-class engine driver's certificate for steam vessels granted under the Inland Steam Vessels Act, 1917 (I of 1917) or under these rules.

25. He must pass a *viva voce* examination similar to that required by rule 13 for a second class engine driver's certificate but more advanced.

26. He must also be able, if required, to show his practical qualifications by actually working the engines of a steamer after fulfilling all the other tests to which he will be subjected.

Qualifications for First-class motor engine driver's certificate

27. A candidate for first class motor engine driver's certificate must have attained the age of twenty-two years and must possess one of the following qualifications, namely:

(a) He must have served for not less than one year as engine driver on regular watch on the main engines of a motor vessel of not less than 585 brake horsepower whilst holding a second-class engine driver's certificate for motor vessels granted under the Inland Steam Vessels Act, 1917 (I of 1917) or under these rules; or

(b) He must have served for a period of not less than 18 months as second driver with a second-class engine driver's certificate for motor vessels granted under the Inland Steam Vessels Act, 1917 (I of 1917) or under these rules in charge of a watch on the main engines of a motor vessels of not less than 226 brake horsepower; or

(c) He must have served for a period of not less than 4 years in the engine room of a motor vessel of not less than 226 brake horsepower, of which period not less than one year must have been served as Chief greaser, syrang or principal tindal whilst holding a second-class engine-driver's certificate for motor-vessels granted under the Inland Steam Vessels Act, 1917 (I of 1917) or under these rules. If the motor-vessel is of not less than 170 brake horsepower he must have served for a period of not less than five years in such vessel of which period not less than two years must have been served as a syrang, principal oilman or chief greaser whilst holding a second-class engine driver's certificate for motor vessels granted under the Inland Steam-vessels Act, 1917 (I of 1917) or under these rules; or

(d) He must have served for a period of not less than 18 months with a second class engine driver's certificate for motor vessels granted under the Inland Steam-vessels Act, 1917 (I of 1917) or under these rules, as driver in charge of the engine of a motor vessel of not less than 113 brake horsepower; or

(e) He must have served for not less than two years as a syrang, principal tindal or chief greaser with a second-class engine driver's certificate for motor vessels granted under the Inland Steam-vessels Act, 1917 (I of 1917) or under these rules, in a motor vessel of not less than 226 brake horsepower; or

(f) He must have served for not less than three years in charge of the engines of a factory or mill under a certificated engineer as well as for not less than one

year in the engine room of a motor vessel of not less than 226 brake horsepower as Assistant Engineer, syrang, principal tindal or chief greaser whilst holding a second class engine driver's certificate for motor vessels granted under the Inland Steam-vessels Act 1917 (I of 1917) or under these rules; or

(g) He must have served for not less than two years as engine driver on regular watch on the main engines of a motor vessel of not less than 226 brake horsepower whilst holding a first class engine driver's certificate for steam-vessels granted under the Inland Steam-vessels Act, 1917 (I of 1917) or under these rules; or

(h) He must have served for not less than four years as engine driver on regular watch on the main engines of a motor vessel of not less than 226 brake horsepower whilst holding a second class engine driver's certificate granted under the Inland Steam Vessels Act, 1917 (I of 1917) or under these rules; or

(i) He must hold an engine-driver's certificate for sea-going steamships granted under the Indian Merchant Shipping Act, 1923 (XXI of 1923) and must have served on regular watch on the main engines of a motor vessel of not less than 226 brake horsepower for period not less than one year.

28. He must pass a *viva voce* examination, similar to that required under rules 16 to 23 for a second class engine driver's certificate but of a more advanced character.

Qualifications for Engineer's Certificates

29. A candidate for an Engineer's Certificate must be not less than twentytwo years of age and must possess the following qualifications, namely:—

(a) He must have served as an apprentice engineer for four years and **prove** that during the period of his apprenticeship he has been employed on the making or repairing of steam engines, boilers, etc.

Journeyman's time shall be considered equivalent to apprenticeship.

In addition to the apprenticeship described above, the applicant must have served two years thereafter as Assistant Engineer in a steamer having engines of not less than 80 nominal horsepower or with a first class engine driver's certificate granted under the Inland Steam-vessels Act, 1917 (I of 1917) or under these regulations, as driver in charge of the engines of a steamer having compound surface condensing engines of not less than 30 nominal horsepower, or

Failing the above service he must have served four years with a first class engine driver's certificate granted under the Inland Steam-vessels Act, 1917 (I of 1917), or under these rules, in charge of the engines of a steamer having compound surface condensing engines of not less than 30 nominal horsepower.

(b) He must be able to **give a satisfactory description** of boilers and the methods of staying them together with the use and management of the different valves, cocks, pipes and connections.

(c) He must understand how to correct defects from accident, decay etc. and the means of repairing such defects.

(d) He must understand the use of the water-gauge pressure-gauge, barometer thermometer and salinometer, and the principles on which they are constructed.

(e) He must state the causes, effects and usual remedies for incrustation and corrosion.

(f) He must be able to explain the method of testing and altering the setting of the slide valves, and method of testing of fairness of shafts and adjusting them.

(g) He must be able to calculate the suitable working pressure for a steam-boiler of given dimensions and the stress, per square inch. on crank and tunnel shafts when the necessary data are furnished.

(h) He must understand the construction of, and be able to maintain in working condition, the auxiliary machinery which may be placed under his charge, viz., electric light engines (steam and oil) and dynamos, electric motors, the various types of steering engines, hydraulic and refrigerating machinery.

(i) He must understand the construction of centrifugal bucket and plunger pumps, and the principle on which they act.

(j) He must be able to state how a temporary or permanent repair could be effected in case of derangement of a part of the machinery, or total breakdown.

(k) He must write a legible hand, and have a good knowledge of arithmetic up to and including vulgar and decimal fractions and square and cube roots. He

must also understand the application of these rules to questions about safety valves, coal consumption, consumption of stores, capacities of tanks, bunkers etc.

(l) He must be able to pass a creditable examination as to the various constructions of crew engines in general use, as to the details of the different working parts, external and internal, and the use of each part.

(m) He must possess a creditable knowledge of the prominent facts relating to combustion, heat, steam and electricity.

(n) He shall be required to make an intelligible hand sketch, or a working drawing of some one or more of the principal parts of a steam-engine, and to mark in without a copy, all the necessary dimensions in figures, so that the sketch or drawing could be worked from (Appendix D) Drawing Boards and T. squares shall be provided, but applicants shall have to bring with them any drawing instruments they may require.

(o) He must be able to state the general proportions borne by the principal parts of the machinery to each other, and to calculate the direct stress, the torsional stress, and the bending stress in round bars and the direct stress and the bending stress in rectangular bars with given loads.

(p) He must be able to describe different types of marine motor engines, their working and uses of the several parts.

Qualifications for Motor engineer's Certificates

30. A candidate for a motor engineer's certificate must have attained the age of 22 years.

31. He must possess the following qualifications, namely:—

(a) He must have served for not less than four years as an apprentice engineer or journeyman at the making, fitting, and repairing of steam or motor engines such as would be recognised as affording useful training for a marine engineer. No time served before the age of 15 shall be accepted. Not less than three years of this period must have been spent at fitting, erecting or repairing internal combustion engines. The remaining year may have been spent either wholly or in part on work of this nature, or at an approved technical school as mentioned in the rules for examination of seagoing engineers.

Service as journeyman shall be considered as equivalent to apprenticeship but no time served before the age of 15 is reached shall be accepted.

Workshop service other than the above may be accepted if it is considered useful training for a motor-engineer, but all such cases must be submitted to the Principal Officer for consideration before the candidate is examined and at least an additional three months of qualifying service on marine internal combustion engines either in the works or on regular watch in main engine room of vessels propelled by these engines must have been performed in respect of each twelve months of workshop service of this nature or other than on the making or repairing of internal combustion engines so accepted. If the service is not altogether satisfactory, a longer additional period than that specified may be required.

Any deficiency in the requisite four years' workshop service may be made up by service afloat on regular watch in the main engine room of a vessel of not less than 565 brake horsepower propelled by internal combustion engines.

If the vessel is a sea-going vessel one and half times the period of deficiency must be served and if an inland vessel, two and a quarter times the period of deficiency shall be required. Thus a candidate who has no workshop service must serve six years in a suitable sea-going vessel, or nine years in an inland-vessel in lieu of his apprenticeship.

(b) In addition to the workshop service as above described or the alternative service afloat, the candidate must have spent 18 months at sea as an engineer on regular watch on the main engines of a sea-going ship propelled by internal combustion engines of not less than 565 brake horsepower or 27 months in a similar inland-vessel.

32. He must write a legible hand and have a good knowledge of arithmetic up to and including vulgar and decimal fractions and square root. He must also be able to work out questions relating to spring or lever-loaded safety and relief valves, consumption of oils and stores, capacities of tanks, bunkers etc, speed of vessels, and other similar problems and be able to calculate suitable working pressures for air receivers of given dimensions and the stress per square inch on crank tunnel shafts and other parts of the machinery when the necessary data are furnished.

33. He must be able to give a clear explanation of the principles on which oil, gas or other internal combustion engines work including the methods of ignition, to point out the differences between them, and to show by means of illustrative sketches and otherwise that he understands the details of the construction of those in general use.

34. He must be familiar with the various methods of supplying air and fuel to the cylinders in the different types of engines, the construction of the apparatus for carbureting, atomising or gasifying the fuel, and the means for cooling the cylinders, pistons, etc.

35. He must have a satisfactory knowledge of the process employed in the construction of internal combustion engines in the workshop and of the methods used in fitting the machinery on board ship.

36. He must know what attention is required by the various parts of the machinery, and understand the use and management of the different valves, cocks, pipes and connections.

37. He must be able to state and describe the chief causes which may make the engines difficult to start and to explain how he would proceed to remedy any defects arising therefrom. He must also be able to show that he understands the mechanism of the starting and reversing arrangements, and is competent to deal with defects therein.

38. He must understand how to make good the results of ordinary wear and tear to the machinery, how to test the fairness of shafting etc., how to correct defects from accident, delay, etc. and how a temporary or permanent repair could be effected in the case of derangements or total breakdown.

39. He must understand the construction of the pressure gauge, barometer, thermometer, and other instruments used in the engine-room and the principles on which they work.

40. He must understand the construction and working of centrifugal bucket and plunger pumps and the principles on which they act.

41. He must understand the construction and working of air compressors, gas producers, steering engines, electric light engines and dynamos, electric motors, refrigerating, hydraulic and other auxiliary machinery found on board-ship.

42. He must possess a good working knowledge of the construction and management of auxiliary steam boilers and machinery, and be familiar with the prominent facts relating to combustion, heat and steam.

43. He must be familiar with the nature and properties of the various oils, etc. generally used in internal combustion engines, must understand what is meant by flash point; and have a knowledge of the explosive properties of gas on the vapour given off by these oils, etc. when mixed with definite quantities of air, and be thoroughly conversant with the danger of exposing such gas or vapour to a naked light; or of allowing any leakage from the oil tanks particularly into the vessels' bilges, and unventilated spaces or from gas producers, pipes, vapourizers etc.

44. He must thoroughly understand the precautions to be taken against fire or explosion from oil or gas and know how to deal with fire should it break out. He should also be familiar with the action of wire gauge diaphragms when placed in pipes and connections to oil tanks etc. for the purpose of preventing the explosion or ignition of oil vapour therein.

45. He must be able to explain the principal construction and arrangement of primary and secondary batteries and induction coils so far as is necessary for the efficient management of an oil engine.

46. He must be able to take off and calculate indicator diagrams and understand the action of the gas in the cylinder as shown thereby.

47. He must be able to make a dimensioned working sketch drawing of some simple part of the machinery.

48. An engineer in possession of a (steam) certificate of competency as a first or second class engine driver granted under the Inland Steam-vessels Act, 1917

(I of 1917) or under these rules, is also eligible for a motor engineer's certificate under the following rules:—

(a) He must have served for not less than six months as an Assistant Engineer on regular watch on the main engines of a sea-going ship propelled by internal combustion engines of not less than 565 brake horsepower or nine months in a similar inland-vessel whilst holding a first-class certificate of competency for sea-going steamships granted or recognised as valid under the Merchant Shipping Act, 1894 (57 and 58 Vict., c. 60). He must also satisfy the examiner that he is fully conversant with internal combustion engines and be able to show both in writing and in *viva voce* examination that he has satisfactory knowledge of the subjects covered by rules 33 to 38 and 43 to 46 of these rules, or

(b) He must have served for not less than 12 months as an Assistant Engineer on regular watch on the main engines of a sea-going ship propelled by internal combustion engines of not less than 565 brake horsepower or 18 months in a similar inland vessel whilst holding a second class certificate of competency for sea-going ships, granted or recognised as valid under the Merchant Shipping Act, 1894 (57 and 58 Vict., c. 60). He must also satisfy the examiner that he is fully conversant with internal combustion engines and be able to show both in writing and in *viva voce* examination that he has satisfactory knowledge of the subjects covered by rules 33 to 38 and 43 to 46 of these regulations.

49. Engineers in possession of ordinary certificates of competency as engineers granted under the Inland Steam-vessels Act, 1917 (I of 1917) or under these regulations, may be examined for the grant of a motor-engineer's certificate.

Provided that they have served for not less than 12 months as Assistant Engineer on regular watch on the main engines of sea-going ships propelled by internal combustion engines of not less than 565 brake horsepower or 18 months on a similar inland-vessel whilst holding an engineer's certificate granted under the Inland Steam-vessels Act, 1917 (I of 1917) or under these rules.

General Regulations as to Examinations Engineers

50. All books necessary for the use of candidates under examination shall be provided, and applicants shall not be permitted to take into the examination room any book, paper, document or memoranda of any description whatever; and subject to the provisions referred to hereafter, they shall also not be allowed to work out their problems on a slate or on waste paper.

51. Candidates shall be allowed in the time allotted to cancel any part of their work, and when required, additional papers shall be supplied by the examiner. These additional sheets must be attached to and form part of the examination papers.

52. In the event of any candidate being discovered copying from another, or affording any assistance or giving any information to another, or communicating in any way with another during the time of examination, he shall be regarded as having failed in his examination, and shall be turned back for three months in the same manner as if he had failed in the practical part of examination; and no part of the fees he may have paid for examination shall be returned to him.

53. If a candidate leaves the room before answering any question which has been given to him, he cannot afterwards be permitted to answer it, but the examiner may substitute other data or another question.

54. (a) The examination of candidates for motor engineer certificate consists of four parts: Arithmetic, Drawing, Elementary questions and *viva voce*. When the number of marks obtained in Arithmetic amounts to 28, that is two-thirds of the maximum, the candidate passes in Arithmetic.

(b) All applicants presenting themselves for examination for motor-engineer's certificates shall be required to give written answers to ten questions shown in Appendix B. These questions are intended to furnish a record to some extent of the candidates knowledge at the time of his examination, and also to induce the candidates to pay more attention to their handwriting and spelling.

55. The form Appendix A, on which these answers shall be written, contains also some questions as to the experience of the applicant to be answered by him in writing.

56. The examiner may add to the *viva voce* questions on the practical management of steam-engines and boilers any of those contained in Appendix B.

57. If at the expiration of the time allowed the candidate has worked out correctly the whole of the question set to him and given satisfactory answers in the *viva voce* examination, he shall be declared to have passed.

58. If at the expiration of the time allowed he has not worked out the whole of the questions set to him, but if the result of the *viva voce* examination taken in conjunction with the answer to such of the questions as he has worked out, is sufficient to satisfy the examiner that the applicant is competent to take charge of engines, he shall be declared to have passed.

59. In other cases he shall be declared to have failed.

60. A report of the examination, and the examination papers shall be forwarded by the examiner to the Principal Officer on the prescribed form.

61. If the candidate passes, he shall receive a formal note to that effect upon which the Principal Officer shall issue the certificate to the candidate, whose testimonials, etc. shall be returned at the same time.

Fees

62. Candidates for examination, in making their application on form Exn. 1 (Appendix E) shall be required to pay the examination fees before any step is taken, whether by inquiring into their services or testing their qualifications, etc. No part of the fee shall under any circumstances be returned to them; but should it be found that their service is not sufficient to entitle them to be examined, or that their testimonials are unsatisfactory they shall be allowed to present themselves for examination without paying any further fee when they have fulfilled the requisite service or are able to produce satisfactory testimonials, as the case may be.

The fee for examination must be paid to the Principal Officer, Mercantile Marine Department or such officer duly authorised on his behalf.

63. If a candidate fails in his examination, no part of the fee he has paid shall be returned to him.

64. The fees are as follows:—

Second-class engine-driver's or second-class motor engine-driver's certificate.	Rs. 4
First-class engine-driver's or first-class motor engine-driver's certificate	Rs. 10
Engineer's or Motor Engineer's certificate.	Rs. 12

Attempted Bribery

65. If a candidate offers a gratuity to any officer, he will be regarded as having committed an act of misconduct and will be rejected. He will not be allowed to be examined again until a period of at least twelve months has elapsed.

Failure

66. If the applicant fails in the *viva voce* or practical part of the examination, he may not present himself for re-examination until he can produce proofs of three months' further service afloat. If he fails in Arithmetic or Drawing only, he may come up again at any time. Engine Drivers may be examined *denovo* after six months' active service as syrang or principal tindal or..... second driver if the past examination showed that they might reasonably be expected to qualify.

General

67. Engineer's and Motor Engineer's certificates, first and second class engine driver's certificates, and first and second class motor engine-driver's certificates, shall be made out and issued in the form hereto annexed.

68. Every such certificate shall be made in duplicate and every person entitled to such certificate shall supply the Principal Officer with two copies of his photograph of pass-port size one of which shall be affixed on each of the copies of the certificate. One copy of the certificate shall be delivered to the person entitled to the certificate and the other shall be kept and recorded by the Principal Officer.

Certificate of Competency as Engine-driver of a steam-vessel having engines of less than 40 n.h.p. plying in the Port of Vizagapatam

To

Whereas you have been found after examination duly qualified to fulfil the duties of Engine-driver of a steam-vessel having engines of less than 40 n.h.p.

plying in the Port of Vizagapatam, I do hereby grant you this Certificate of Competency as such Engine-driver.

Given under my hand and seal.

Principal Officer, Mercantile Marine
Department, Madras District.

This _____ day of _____

19 .

No. of Certificate _____

Bearer _____ son of _____ by caste _____

Date* and place of birth, showing village, thana and district. Residence, showing village, thana and district.

Height.

Personal description, stating particularly any permanent marks or scars.

Number of Register Ticket _____

Signature.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Principal Officer Mercantile Marine Department, Madras District, Madras.

Issued at _____ on the _____ day of _____ 19

Registered.

Principal Officer, Mercantile Marine
Department, Madras District.

NOTE.—This Certificate is valid only for steam-vessels manned and officered entirely by persons who can speak Hindustani or Tamil or Telugu or Urdu.

N.B.—The above note should be struck out when the Certificate is granted to an English-knowing candidate.

* If not known exactly, must be stated on the best information or evidence available.

Certificate of Competency as engine-driver of a steam-vessel having engines of less than 100 n.h.p. plying in the Port of Vizagapatam.

To

Whereas you have been found duly qualified to fulfil the duties of Engine-driver of a steam-vessel having engines of less than 100 n.h.p. plying in the Port of Vizagapatam I do hereby grant you this Certificate of Competency as such Engine-driver.

Given under my hand and seal.

Principal Officer, Mercantile Marine
Department, Madras District.

This _____

day of _____ 19

No. of Certificate _____

Bearer _____ son of _____ by caste _____

Date* and place of birth, showing village, thana and district. Residence, showing village, thana and district.

Height.

Personal description stating particularly any permanent marks or scars.

Number of Register Ticket _____

Signature.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Principal Officer Mercantile Marine Department, Madras District, Madras.

Issued at _____ on the _____ day of _____ 19

Registered.

Principal Officer, Mercantile Marine
Department, Madras District.

NOTE.—This certificate is valid only for steam-vessels manned and officered entirely by persons who can speak Hindustani or Tamil or Malayalam or Telugu or Bengali or Urdu.

N.B.—The above note should be struck out when the Certificate is granted to an English-knowing candidate.

* If not known exactly, must be stated on the best information or evidence available.

Certificate of Competency as Engineer of a steam-vessel having engines of any nominal horsepower plying in the Port of Vizagapatam

To

Whereas you have been found duly qualified to fulfil the duties of Engineer of a steam-vessel having engines of any nominal horsepower plying in the Port of Vizagapatam, I do hereby grant you this certificate of competency as such engineer.

Given under my hand and seal.

Principal Officer, Mercantile Marine
Department, Madras District.
day of 19

This

No. of Certificate

Bearer

Date* and place of birth.

Height.

Personal description, stating particularly any permanent marks or scars.

Number of Register Ticket.

Signature.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Principal Officer Mercantile Marine Department, Madras District, Madras.

Issued at on the day of 19

Registered.

Principal Officer, Mercantile Marine
Department, Madras District.

NOTE.—This certificate is valid only for steam-vessels manned and officered entirely by persons who can speak Hindustani or Tamil or Malayalam or Telugu or Bengali or Urdu.

N.B.—The above note should be struck out when the Certificate is granted to an English-knowing candidate.

* If not known exactly, must be stated on the best information or evidence available.

Certificate of Competency as Engine-driver of a motor-vessel having engines of less than 565 n.h.p. plying in the Port of Vizagapatam.

To

Whereas you have been found after examination duly qualified to fulfil the duties of Engine-driver of a motor-vessel having engines of less than 565 n.h.p. plying in the Port of Vizagapatam, I do hereby grant you this Certificate of Competency as such Engine-driver.

Given under my hand and seal.

Principal Officer, Mercantile Marine
Department, Madras District.
day of 19

This

No. of Certificate

Bearer

son of

by caste

Date* and place of birth, showing village, thana and district.

Residence, showing village, thana and district.

Personal description, stating particularly any permanent marks or scars

Height.

Number of Register Ticket.

Signature.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Principal Officer Mercantile Marine Department, Madras District, Madras.

Issued at _____ on the _____ day of _____ 19____
Registered.

Principal Officer, Mercantile Marine
Department, Madras District.

NOTE.—This certificate is valid only for steam-vessels manned and officered entirely by persons who can speak Hindustani or Tamil or Malayalam or Tellugu or Bengali or Urdu.

N.B.—The above note should be struck out when the Certificate is granted to an English-knowing candidate.

* If not known exactly, must be stated on the best information or evidence available.

*Certificate of Competency as Engineer of a motor-vessel having Engines
of any brake horsepower plying in the Port of Vizagapatam*

To

Whereas you have been found duly qualified to fulfil the duties of Engineer of a motor-vessel having engines of any brake horsepower plying in the Port of Vizagapatam, I do hereby grant you this Certificate of Competency.

Given under my hand and seal

Principal Officer, Mercantile Marine
Department, Madras District.

This _____ day of _____ 19____

No. of Certificate

Bearer

Date and place of birth.

Height.

Personal description, stating particularly any permanent marks or scars.

Number of Register Ticket.

Signature.

N.B.—Any person other than the owner thereof becoming possessed of this certificate is required to transmit it forthwith to the Principal Officer, Mercantile Marine Department, Madras District, Madras.

Issued at _____ on the _____ day of _____ 19____
Registered.

Principal Officer, Mercantile Marine
Department, Madras District.

APPENDIX A

(See rule 55)

To the Examiner,

The Examiner shall require all candidates to fill up the particulars noted below and shall forward the same to the Principal Officer, Mercantile Marine Department, Madras District, along with the report of the examination.

Failure in the elementary question shall be treated as failure in arithmetic.

The numbers of the questions for each examination shall be selected by the examiner, and they are not to be communicated to the candidate until his examination commences.

Port	Class for which examined
Date	Candidate's name
A.	Where and how long did you serve in works at the making or at the repairing of engines, and in what capacities?
B.	How long have you served in the engine-room at sea or on inland waters, or in the Port of Vizagapatam and in what capacities?

Port	Class for which examined
Date	Candidate's name.
C.	With what description of engines have you served at sea, or in inland waters, or in the Port of Vizagapatam paddle, or screw, or both? What size were the engines.
D.	With what description of boilers have you served at sea, or on inland waters, or in the Port of Vizagapatam cylindrical multitubular, water tube, sectional or flue boilers?
E.	What engine defects have come under your notice at sea or on inland waters, or in the Port of Vizagapatam cylindrical, multitubular, water tube sectional remedied? Give the names of the steamers for verification.
F.	What boiler defects have come under your notice, what caused these defects, and how were all they remedied? Give names of the steamers for verification.

For the questions to be answered on the following, see the list of Elementary Questions in Appendix B. The questions need not be written; only the answers to them.

Question No.
Question No.
Question No.
Question No.
Question No.
Question No.

APPENDIX B

(See rule 54)

ELEMENTARY QUESTIONS

For the examination of Engineers for Certificates of Competency

1. What parts of an engine are generally made of wrought iron?
2. What parts of an engine are generally made of cast iron?
3. For what parts of an engine is steel sometimes used?
4. What parts of an engine are generally made of brass or gunmetal?
5. Where is "white metal" sometimes used? On account of what property possessed by it is it adopted? What objection is there to its more general use?
6. For what parts is Muntz metal sometimes used? Is it malleable? For what properties is it valued?
7. What difference is there in the composition of cast iron, of wrought iron and of steel?
8. How can cast iron, wrought iron and steel be distinguished from each other?
9. What are the different properties of cast iron, of wrought iron, and of steel?
10. What is meant by the terms "breaking stress", "proof stress", "safe working stress"?
11. What is the cohesive strength, or breaking stress of good ordinary wrought iron?
12. Tempering steel; how is it done and in what order do the colours come?
13. What is case-hardening?
14. Which of the common metals or alloys can be forged and which of them are brittle or "short"?
15. What is meant by 'welding'? Which of the common metals can be welded?
16. The expansion of metals by heat; give examples of this in the engine and in the boiler.
17. In the construction of steel cylindrical marine boilers for what parts have the plates to be worked hot? What precautionary treatment of these plates is afterwards necessary?
18. In what parts of cylindrical marine boilers is the strongest rivetting employed? In which of the shell seems is it most necessary?

19. What is "caulking", and how are seams prepared for caulking?
20. Describe the different ways of fastening the ends of the main stays of a boiler? What are the merits of, or objections to, the different plans?
21. What stress per square inch is allowed on boiler stays?
22. Describe a rivetted stay, and state where such stays are commonly used?
23. Where are thin plates to be looked for in a boiler as it wears, and how is the thinness to be detected?
24. How are boiler tubes fixed? What are the "stay tubes" and how are they secured?
25. Where is it generally that boiler tubes leak? How is this defect repaired? What are the causes of this leaking?
26. What are the causes of cracked tube plates? Where are the cracks situated? How are they repaired?
27. What is the difference between a "dry uptake" and a "wet uptake"? Which requires more repair? Why? Where have you seen a wet uptake?
28. What is the superheater? What is its construction? What valves are on it? There is sometimes a gauge glass on it. What is that for? Are superheaters now in general use?
29. What parts of marine multitubular boiler are first injured by shortness of water?
30. Where are angle irons sometimes used in the construction of a boiler, and where are flanged plates used?
31. Priming; to what causes is it attributed? What means are applied to prevent it? What evils may be produced by it?
32. Funnel draught; what makes it? What checks it?
33. Flame is sometimes seen at the top of the funnel; what causes this appearance? Is it beneficial or is it detrimental? Why so?
34. A blast pipe; what is its construction? Where is it placed? For what is it used?
35. How many bottom blow-off cocks are generally fitted to each boiler, and why are they so fitted?
36. Blow-off cocks are sometimes fitted with a spanner guard; for what purpose is this? Describe how the guard is formed.
37. Water-gauge test-cocks; where are they placed? At what heights? Must the cocks themselves be at those heights? What provision is made for cleaning these cocks should they ever become choked? When there are no test-cocks, how is the height of the water ascertained?
38. What is a dead-weight safety valve? Of what are the rubbing surfaces formed? How is a lock-up valve arranged to admit of lifting it or of turning it round, and to prevent adding to the weight?
39. About what area of safety valve is now required by the Board of Trade? What is the effect of suddenly opening a safety valve when steam is up? To about what extent do safety valves rise when blowing-off without being eased by hand?
40. Spring-loaded safety valves; what advantages have they that are not possessed by dead-weight valves? What are the disadvantages, if any, as compared with dead-weight valves?
41. Of what pieces does a glass water gauge mounting consist? How does it act? Where is it placed? At what height? Is it liable to derangement? How is its working tested?
42. Glass water gauges have sometimes pipe connections top and bottom; what is the object of this arrangement? Should there be cocks at the extremities of these pipes? Why? Or why not?
43. Describe a Bourdon steam gauge. Some gauges have an inverted syphon pipe below them; what is its use?
44. Why is a small cock sometimes put on the pipe leading to a steam gauge? Where should it be placed, and what error might be made by omitting to use it?
45. Do steam gauges indicate the total pressure of the steam or only a portion of that pressure? What is the pressure measured from?
46. What is meant by the salting of the boiler? How is this prevented? What is the density of ordinary sea water? How is the density ascertained? What is

the difference between the formation of scale and the salting of the boiler? What is the maximum density at which boilers should be worked at sea? In the event of condenser tubes leaking, what is the minimum density at which boilers should be worked? Give your reasons.

47. Scum cocks and pipes; how are they arranged? Where are they placed? At what height in the boiler? When are they used? When must they be shut? Neglect of these cocks leads to what dangers?

48. Of what does scale consist? Where is it most objectionable? How is it removed? How is its formation prevented? What evil effects are produced by it?

49. What is a salinometer? Of what does it consist? How does it act? How is it graduated? Can it be used at any temperature indiscriminately?

50. What harm may be done through the check valve of one of a set of boilers being defective while under way? How would you work to avoid this harm?

51. How is the leak from a split tube stopped in a boiler under way? Describe the operation?

52. What is the use of dampers? Where are they fitted? When should they be used?

53. When there are no dampers fitted, what is used instead? What evil to the boiler is sometimes attributed to this? When the heating surfaces are clean, does this occur?

54. Describe the piston of a steam cylinder with its different rings and their uses. There are generally round pieces let in flush on one side of a piston? What are they? How are these pieces fixed?

55. Cylinder drain cocks; what is their use? There is sometimes a valve upon each cock. What purpose does it serve?

56. Cylinder escape valves; of what do they consist? How protected? How regulated? When are they most needed? To what danger do they expose the engineer? What precaution is sometimes used to obviate this danger?

57. What is a compound engine? What different kinds are there for screw steamers, in respect to the number and arrangement of their cranks and cylinders? What is a triple expansion engine?

58. What is link motion? What are some of its advantages? In modern engines for the screw propeller when there is no link motion, what takes its place?

59. What is a separate expansion valve? Why is it not fitted to all engines? What effect has an expansion valve upon the starting and upon the reversing of the engine?

60. What arrangement is applied to reduce the friction of a slide valve? To what is the friction due?

61. Describe a loose eccentric; how does it act? In what engines are the loose eccentrics still employed?

62. What is the travel of the eccentric rod? How it is measured on the eccentric? What is the travel of the slide valve when the link motion is in mild gear, and the engine still moving?

63. What are 'double heat valves'? What objections are there to their use?

64. What is a circulating pump? Is it always worked by the main engine? Give an example from your last steamer of the three water temperatures generally noted by careful engineers.

65. An air valve is sometimes fitted to a circulating reciprocating pump; what purpose does it serve?

66. What is the difference between a bucket air-pump, a piston-air-pump, and plunger air-pump?

67. Are double acting air-pumps made with plungers, with pistons or with buckets? Describe the construction and action of circulating pumps.

68. What is an air-pump trunk? When is it necessary? How is it attached to the bucket? Centrifugal pumps; describe their construction and mode of working.

69. What class of air-pump requires both foot and delivery valves, and in what other class can either of these valves be in some cases dispensed with?

70. What are marine governors? What is their general construction? How do they act?

71. With a surface condenser and a single acting air-pump what is the effect of a leaky foot valve, and what is the effect of a leaky bucket when there is also a foot valve?
72. Where is the air-pump pet cock or valve placed? How does it act? What is its object? Does it in every case reduce the effective capacity of the pump? It is equally applicable to double acting pumps.
73. At what temperature is the hot well worked? What is the effect of higher temperatures? What is the effect of lower temperatures? What limits the low-ness of temperature? Has a very low temperature any disadvantages?
74. Bilge injection with jet condensers; what are the fittings required? When is it used? What precautions are necessary in using it?
75. When surface condensers are used, what takes the place of the bilge injection? To what is the connection made? How is its valve formed? Why is this necessary?
76. What are the practical guides to the proper amount of opening of the inlet valve for the circulating pump?
77. Feed-pump pet cock or valve; where is it placed? What is its use? How does it act? Is it always a necessary fitting?
78. What are some of the ways of fastening the ends of surface condenser tubes? About what size and about what thickness are condenser tubes? What parts of a surface condenser are made of brass?
79. What is a blow-through valve or cock? To what is it attached? There is sometimes a valve which, when opened, admits steam from the slide valve casing to the exhaust port; what is its use? To which cylinder is it fitted?
80. What are snifting valves? Why are they generally omitted now?
81. What connections are generally fitted to the donkey pump, and to what services can it be applied?
82. When the engines are stopped in harbour with steam up, what are to be shut and what are to be opened?
83. How is an engine heated up before starting? What precautionary examinations are made before starting?
84. What is an interceptor or catch-water? Where is it fixed, what is its construction, how does it act, and what attention does it require?
85. Describe an air pump bucket with its valve or valves and its packing? Of what are the valves generally made?
86. Of what materials are air-pump rods made? Why?
87. What is the racing of the engine? When does it occur? What danger attaches to it? What is done to prevent it?
88. When under way, when the air-pump bucket is at the top of its stroke, at what height is the water in the condenser?
89. What is meant by the "Pitch" of a screw propeller? How is it measured?
90. Explain the difference between a 'right hand' and a 'left hand' propeller, and state how each of them revolves.
91. What is the slip of a screw propeller? How is its amount expressed in figures?
92. Which of the valves about engines and boilers have to be worked by hand, which of them are self-acting, and which are worked by the motion of the engine?
93. Why is soda sometimes put into a boiler, and how is it put in when under way? What is the kind of soda used?
94. Tallow cups for cylinders were sometimes made with two small cocks, or with only one small cock, or with one large hollow plug cock or with one small cock and a valve; which of these is suitable for a high pressure cylinder, and which for the cylinder of a condensing engine? Describe how the cup with only one small cock is used. What is now generally used instead of these? How has this change come about?
95. Does a cylinder escape valve, self-acting allow all the water to escape? If not how much is left in the cylinder?
96. What is a "Steam Lubricator" (sometimes called an Impermeator)? Explain its action. To what part of the engine is it connected? Will throwing cold water over it make it work faster or slower? Describe the one used in your last steamer.

97. A common paddle wheel; of what is the centre made? Of what are the arms formed? What is the form of the bolts which attach the floats to the arms? How are the arms attached to the centres?

98. Why have some paddle wheels one or more cast-iron floats in each wheel? With what engine are these most required? At what part of the circumstance are they placed?

99. Why are paddle wheel floats sometimes made of different breadths in the same wheel? With what description of engine is this most needed? Where are the broad floats placed and where are the narrow floats placed in the circumstance of the wheel?

100. What difference is there between a radial paddle wheel and one with feathering floats? What is the object of feathering floats? Are all the eccentric rods attached in the same way and are they all of the same form?

101. Whereabout is the centre of the eccentric of a paddle wheel with feathering floats placed? In that case are the feathering levers on the striking face or on the back of the float? When the paddle shaft has an outer bearing, how is the eccentric made?

102. Of what materials are the working surfaces of a paddle wheel with feathering floats? How are they lubricated?

103. What is a "Disconnecting Paddle Engine"? At what place is the disconnecting effected? How is it accomplished? In which of the cranks of a disconnecting engine are the crank pins fixed?

104. Is link motion valve gear or loose eccentric generally used for disconnecting idle engine? For what steamers are disconnecting paddle engines frequently employed?

105. What are expansion joints? Where are they necessary? What attention do they require? Of what should the working surfaces be made?

106. What omission in the construction of expansion joints may lead to a serious accident when steam is first applied? How is this prevented in the construction of a steam trunnion pipe for an oscillating engine?

107. Describe an oil cup, with a syphon worsted. How is the worsted arranged? How is it cleaned? How far down the tube does it extend?

108. What parts of a screw shaft are generally covered with brass? Why is this necessary? About what thickness is the brass?

109. Describe a thrust bearing; which of the surfaces wears? Why is there sometimes a number of oil tubes or one thrust bearing?

110. What is the stern tube or screw shaft pipe? Why is a pipe of such a length required? Of what is it made? How is it fixed at each end?

111. What is a *lingum vitae* bearing? How is the wood fitted? Where is such a bearing generally used?

112. How is a screw propeller fixed on the shaft? What means are used to prevent its getting loose at sea?

113. Where are sluice valve placed? What large sluice valve is there in almost all screw steamers? From what position should this valve be worked? Why so? What attention should it receive?

114. With condensing engine what valves or cocks are on the skin of the ship in the engine room and in the stoke-hold?

115. What are the necessary fittings of a marine boiler?

116. With a surface condensing engine what cocks or valves are opened some time before the engine is started so as to be ready for starting whenever the order is given?

117. What is a steam jacket? What cocks are on it? In what engines are jackets most generally used? Do they require to be felted?

118. What parts of an engine or its fittings should be felted or otherwise protected from radiation?

119. What are the small cylinders sometimes fitted on the slide valve casing cover of vertical engines? Explain their action. To what are they connected by a pipe? Why?

120. Name the principal pipes in connection with the engines and boilers of a steamer, and state to what the ends of these pipes are connected?

121. Through what cocks or valves, pipes and chambers does the water pass on its way from the sea inlet rose plate to the water space of the boiler, with a jet condenser?

122. Through what cocks or valves, pipes and chambers does the circulating water of a surface condenser pass?

123. Through what cocks or valves, pipes and chambers does the steam pass from the boiler until it is in the form of water in the hot well?

124. Name the pieces of the engine through which the pressure of the steam is transmitted from the piston to the screw propeller. Name them in the order in which they act.

125. What is an air vessel? How does it act? At what parts of an engine or its fittings are air vessels generally applied?

126. What is the construction of a mudbox? Where should mudboxes be placed? Why are they necessary? How should the space be divided by the rose plate, and why?

127. What is the trunk engine? Why has it fallen into disuse?

128. What is an oscillating engine? For what steamers are oscillating engines generally adopted? Why? How is the steam conveyed to and from the slide valve casing.

129. Of what parts does the valve motion gear of an oscillating engine consist?

130. For what have geared engines sometimes been used? Of what were the cogs or the large wheel made?

131. At what part of a screw steamer is the pressure that propels it applied to the hull?

132. At what part of a paddle steamer is the pressure that propels it applied to the hull?

133. About how much fuel per indicated horsepower per hour is required by modern steam engines, common compound, and triple expansion?

134. What is the explanation of the economy of the surface condenser?

135. What is the construction of a surface condenser? Of what are its tubes made? How are they fixed? How are they kept tight? What is done with a split tube?

136. Where do surface condensers foul? How are they cleaned?

137. What non-conducting substances are employed to prevent radiation, and how are they applied?

138. In the construction of smoke-box doors and of dry uptakes, what provision is made to lessen the amount of radiation?

139. How can the formation of excessive smoke be prevented? Describe smoke preventing apparatus?

140. What is meant by "circulation" in a boiler, and what are the results of defective circulation?

141. What means are sometimes adopted to improve the circulation in a boiler?

142. By what arrangement is the circulation promoted in a "hay-stack" boiler?

143. Describe a ship's side air-pump discharge valve. In what respects does it sometimes differ from a common stop-valve and what attention does it require?

144. What is construction of a feedescape valve, to what is its discharge connected, and how is its loading regulated? Where should the escaping water flow?

145. When there is no feed escape valve, what is the arrangement of the feed valves or cocks?

146. What is the measure of a horsepower? How is indicated horsepower ascertained?

147. Has "nominal horsepower" a fixed meaning? What is the use of this expression? What is generally taken as the measure of one horsepower nominal?

148. What is 'back pressure' in a cylinder? About how much is it in each of the cylinders in your last steamer? Is excessive cushioning ever a trouble under certain conditions in modern engines? Say when and why and in which cylinder this occurs?

149. What is meant by "speed of piston"? About how much is the speed of piston in modern marine engines?

150. What is "atmospheric pressure"? What is its average amount? What instrument tells this amount?

151. What is "gross pressure" or "absolute pressure"? What pressure is that shown by the steam gauge?

152. What is meant by "cutting off" steam? How is it done? What part of the valve regulates the cut off?

153. What is a piston slide valve? Describe its construction. Why are they frequently employed in place of the common slide valve? Have they any disadvantages compared with a common slide valve? If so, name them.

154. What fixes the time of closing the exhaust? After the exhaust is closed and before the port opens for steam what becomes of the steam that is in the cylinder?

155. What is the lead of the valve? What is its object? About what amount is it?

156. What is the "cover" or "lap" of the valve? What is its object? About what proportion of the stroke of the valve is it made?

157. What is the "exhaust cover" of a slide valve? What is its effect upon cushioning and upon exhaust?

158. What is "minus cover" or 'minus lap' on the exhaust? What is its effect upon the exhaust and upon cushioning?

159. What is "cushioning" or "compression" in a steam cylinder? How is it affected by the amount of cover or of minus cover there may be upon the exhaust? How is it affected by the exhaust pressure?

160. What is "mean effective pressure"? How is its amount ascertained?

161. What is a dial vacuum gauge? What is its construction? For what is it used? About what amount should it show when the engine is working all right? What effect have the variations it indicates on the performance of the engine?

162. Does the vacuum gauge enable you to tell what pressure there is in the condenser, or must you have recourse also to the barometer to arrive at that? How would you ascertain the actual amount of back pressure there is in the condenser?

163. What is a barometer? What is its construction? Is a barometer sometimes used instead of a vacuum gauge? In what respect does the weather barometer differ from the vacuum gauge barometer?

164. The common vacuum gauge and the common steam gauge, in which of them are the graduations marked from atmospheric pressure? Does either of them tell what is the true actual pressure in the boiler or in the condenser?

165. Do steam and vacuum gauges vary with the variations of the weather barometer? When the weather barometer varies from 29 to 31 how much will the vacuum gauge vary and how will that affect the working of the engine? Why?

166. Vacuum is generally stated as so many inches. What is meant by say 20 inches vacuum? What does that tell us about the absolute pressure of the vapour then in the condenser?

167. From what depth will a pump draw water? Is there any limit? Why?

168. What is vacuum? Can vacuum move a piston? When the temperature of the water in the condenser is 212° Fahrenheit, what is the greatest degree of vacuum there can then be in the condenser?

169. What is a thermometer? What is its construction? What is the property of matter that is the principle of its construction? What temperatures are regularly noted by careful Engineers?

170. What is the temperature of (1) melting ice, (2) boiling water, (3) steam about 60 lbs. pressure by the steam gauge, (4) steam about 100 lbs., (5) steam about 150 lbs., (6) smoke in the funnel, (7) water in the hot well?

171. What is meant by the "conduction" of heat? Give examples of it in the boiler and in the engine.

172. What is meant by the 'convection' of heat? Give examples of it in the boiler and in the engine.

173. What is meant by "radiation" of heat? Give examples of it in the boiler and in the engine.

174. Which is convection, which is radiation and which is conduction in the following cases (a) Heat from the glowing—fuel to the furnace crown? (2) Heat passing from one side of the furnace crown plate to the other? (3) Heat passing from the steam pipes in the engine-room? The heat of evaporation?

175. What are the effective heating surfaces of a marine boiler?

176. What parts of a marine engine are exposed to danger when the temperature is below freezing point?

177. What precautions are necessary in cold climates when the temperature is below freezing point?

178. State as many ways as you can by which a boiler might not get its full feed. A boiler or one of a set of boilers, gets short of water although the feed valve is open its proper amount; to what causes might this be due?

179. Of what are furnace bars generally made? About what thickness are they at the top? About what space is between them?

180. About how many tons of steam coal will be burnt per day in four furnaces, each 3'-0" wide, and of about the usual length? On what ground do you say so?

181. About how many tons of steam coal will be burnt per day with a good triple expansion engine, surface condensers, the low pressure cylinder 40 inches diameter doing average work? On what grounds do you say so?

182. A pair of inverted cylinder direct acting engines, there is a liner half an inch thick between the ahead eccentric rod and the eccentric strap, in over-hauling the engine this place is lot and forgotten; what difference will its omission make in the working of the engine, on the admission, on the cut off, and on the exhaust the steam? Which will take place earlier and which later, distinguishing between the up stroke and the down stroke?

183. In a pair of inverted cylinder direct acting engine driven a right hand screw, on which of the crosshead guide bars is the pressure greatest in the up stroke and on which in the down stroke?

184. A screw propeller is getting loose, it has a little play on the shaft, sideways on the key or feather; how will this show in the engine room?

185. How would you prove whether the centre line of the trunnions of an oscillating cylinder be fair with the centre line of the main shaft?

186. How can the fairness of a line of screw shafting be tested without lifting the shafts?

187. Where are steel forgings generally used in marine engines?

188. What is the composition of nickel-steel? Where is it sometimes used in engines and boilers?

189. How is forced draught generated on board ship and supplied to boiler-furnaces? Is the air heated before delivery? If so, how?

190. What is "induced" draughts? Compare the merits of "forced" and of "induced" draught.

191. How is the intensity of forced or induced draught measured? What is the usual pressure employed in the mercantile marine?

192. An explosive gas is liberated from bunker coal. Usually in well-ventilated bunkers this gas escapes into the atmosphere without doing harm. In ill-ventilated bunkers the gas after mixing with a certain proportion of common air has been known to explode a naked light has been brought into contact with it. What is the composition of the gas? Where is it found, in bunkers, pockets, and coal shoots? How may it be got rid of as soon as it evolves from the coal? How many cubic feet of air to one of the gas forms a violent explosive mixture?

193. A lighted lamp or candle has sometimes been lowered into an apparently empty paraffin tank and produced an explosion resulting in injury to the person holding the light. What did the tank probably contain and what produced the explosion?

194. In vessels carrying coal cargoes it has been observed that, generally speaking the gas which escapes from the body of the coal is found more abundantly at the forward end of the hold than at the after end. Why should this be so?

195. In recently opened ballast tanks, double-bottoms, and boilers, a light lowered into either has sometimes been extinguished. What would in all probability cause this?

196. In double-bottom steamers where does the bilge water lie, and where are the roses of the bilge pipes fitted?
197. What is the advantage of a large rose over a small one?
198. Why, especially in vessels carrying cargoes liable to shift, should engine bilge suction be fitted to both wings of the bilge?
199. In a heavily listed vessel, why is it difficult to keep steam?
200. What means are sometimes provided for temporarily coupling together the broken parts of, say, a tunnel-shaft? Describe the fitting.
201. Does the pressure on the thrust-collars vary with the horsepower or with the speed of the ship, or how?
202. If the holding-down bolts of a thrust-bearing should become slack, what effect would it have upon the working of the engine?
203. In an engine with three cranks, which of the three is subject to the greatest torsional stress (1) in going ahead (2) in going astern.
204. Is it usual to make the crank shaft of a triple or quadruple expansion engine in one piece? And is the diameter of the shaft uniform from end to end? Give your reasons for the practice which obtains?
205. In a "built" crank shaft how are the webs rigidly secured to the pins and to the body of shaft?
206. There are various descriptions of donkey engines in use on board ship for pumping purposes. Some pumps are fitted with escape-valves, some are not. Why should this be?
207. Explain the function of an air vessel fitted to a feed pump. Make rough hand sketches of (1) a satisfactory vessel, (2) an unsatisfactory vessel, where say, the air spring has been destroyed by carelessness or has never been properly provided.
208. Should cocks or escape valves be fitted to air-vessels? Why or why not?
209. Where, by preference, should the escape valve of a feed pump be placed? Why?
210. Scum cocks are sometimes fitted to boiler shells at a height convenient for engineers to manipulate when standing in the stockhold; the scum pipes in such cases are laid upward, inside the boiler, to a little above the combustion chamber tops. What danger may arise from this arrangement?
211. Cocks for testing the water level of boilers are sometimes fitted within reach of the engineer who is standing in the stokehold. These may have internal pipes leading upward and terminating at various levels. Under what circumstances may these become misleading?
212. Why should the pipe which leads from the bottom of the water-gauge column to the bottom of the boiler-front, or back, be covered with non-conducting material? Why also should it never have lengthy horizontal bends?
213. In your own experience, how frequently is this pipe removed and cleared?
214. Why even with the best of water-gauges, is it advisable occasionally to use the drain-cock?
215. Steam loops have sometimes been inadvertently made in the length of piping leading from the top of the water-gauge column to the top of the boiler. Roughly sketch such a loop and explain the danger arising from its existence.
216. Describe your method of thoroughly testing the water-gauge system to satisfy yourself that all the cocks and pipes are clear. Your answer can be written on a supplementary sheet of foolscap, which the examiner will hand you. Hand sketches, mere lines indicating pipes and circles indicating cocks should be made. Identify the cocks and pipes by letters or numerals.
217. Describe the construction of a water-tube boiler, mentioning the type selected.
218. In a water-tube boiler how is an economiser fitted and what is its duty?
219. How is the water-gauge fitted in a water-tube boiler? Are glass gauges used?
220. The pressure of the steam in water-tube boilers is sometimes greater than at the engines. Why is this, and what percentage above the engine pressure does it amount to? How is this difference of pressure maintained?

221. Describe any automatic method of feeding water-lube boilers. Of what material are the tubes made?

222. Describe the construction of any steam turbine you are acquainted with which is used on board ship. How is the expansion of steam effected? How many propeller shafts are employed, and how many propellers?

223. Is the same power in a steam turbine available to go astern as to go ahead?

224. Of what material are the propellers made in a steam turbine?

225. How many pounds of coal per indicated horsepower per hour are burnt with turbine engines? Name the type of boiler in use.

226. Describe the construction of a feed-water-head and give the name of its manufacturer.

227. To about what temperature is the feed-water raised by passing through a feed-heater?

228. What fittings are usually placed on a feed-heater? Why are they necessary?

229. Describe any well-known independent feed pumps.

230. Are independent feed-pumps automatic in their action? Explain the action.

231. What advantage, if any, have independent feed-pumps over feed-pumps worked by the main engines?

232. Describe the construction of a feed-filter, enumerating its valves and cocks.

233. How can the filter be cleaned? What ingredients are generally removed when cleaning takes place?

234. What is the intercepting material in a filter made of? How is it fitted?

235. Describe an evaporater, and mention the type.

236. What fittings are necessary with evaporators?

237. How is the brine got rid of in an evaporator?

238. How may the evaporator coils be cleaned?

239. What is a dynamo? Describe its various parts. For what is it used?

240. In what respects does an electric motor differ from a dynamo? Where are electric motors sometimes used on board ship?

241. Describe a system of electric lighting employed on board ship.

242. How is the position of a fault in the electric circuit discovered?

243. What is "sparking" and may it under some circumstances (naming them) be a danger?

244. What is "short-circuiting" and to what evil may it give rise?

245. What means are employed to prevent any part of the circuit becoming overheated?

246. Describe the features of an arc-lamp.

247. Describe the construction of a glow-lamp.

248. What is the usual candle-power of the small glow-lamps in general use on board ship?

249. Define the following terms: Ampere, volt, ohm, watt. What is the measure of an electrical horsepower?

250. Explain the uses of switches, brushes, commutators, cutouts, field-magnets armatures and resistance-coils.

251. Why is it desirable to fit a dynamo in a coal place on board ship?

252. What undesirable effect will ultimately occur to an electric wire whose sectional area is constantly diminishing, say, through corrosion?

253. What danger might arise from leading electric wires through coal bunkers?

254. Is it better to lead electric wires above or below side-scuttles? Why?

255. What instruments are used on board ship to ascertain the strength of an electric current?

256. In vessels fitted with hydraulic cranes, etc., where do they obtain their power? How is the hydraulic pressure kept at a relatively constant amount?

257. Describe any steam-steering gear you are acquainted with.

258. When the helm is put hard over and the ship is going full speed ahead what prevents the rudder returning to the amidship position?

259. In the case of a steamship under way, does the officer or man manipulating the steam-steering wheel overcome any resistance exerted by the rudder?

260. Explain clearly what is being done by a helmsman manipulating the wheel of the steam-steering engine.

261. Is there any difference between the amount of horsepower required to put a helm hard over, in a given time, when the vessel is going full speed ahead, and when she is going full speed astern? This question refers to the case of a steamer fitted with one rudder only, and demands a more complete answer than merely "Yes" or "No".

262. What precautions should be taken before removing a man-hole-door of a steam-boiler? In the absence of such precautions, what casualties might occur?

263. Describe the chief features of the engine-governor fitted to a steamer you have served in. Describe its action, give the maker's name and name of ship.

264. Name the principal parts of internal combustion engines and briefly state their functions.

265. What kind of oil is usually employed in motor-engines? What is its flash-point? What is its specific gravity? What is its calorific power? What precautions are taken in its storage to guard the public against the casualty by fire or explosion?

266. How many cylinders are generally used in motor-engines? What kind of pistons are usually fitted? How frequently (measured in revolutions) is explosion per cylinder effected? How is explosion in the cylinder carried out?

267. Describe how an oil-motor is started. If starting proves difficult, where would you chiefly look for defects? How is piston speed modified? How is the speed of vessel varied? How is reversing effected?

268. Before examining an oil-motor with a naked light, what steps should be taken for safety's sake?

269. How frequently should an internal combustion engine be opened up for examination, cleaned, and its parts readjusted? What difficulty arises when the internal parts become foul with carbonized oil?

NOTE.—Questions should be read in the light of their context. Thus the "spark-ing" referred to in question 243 relates to the sparking in an electric lighting circuit on board ship. (see question 241).

APPENDIX C

[See rule 29(d).]

READING THE WATER-GAUGES

(Engineers and Engine-drivers)

Notwithstanding that reading of the water gauge is made a special feature in the examination of engineers, many boiler casualties result from the Engineer of the watch either not understanding the construction of the water gauge fittings or not satisfying himself by actual trial that the cocks, pipes etc. are clear.

In one case, two furnace crowns came down in a steamer that was just starting on a voyage. The engineers were satisfied that there was plenty of water in the boiler because the water gauge showed full glass and they called the attention of the surveyor to this fact as being conclusive evidence that the casualty could not have resulted from shortness of water. On examination of the fittings, however, it was found that the cock between the boiler and the steam pipe leading to the gauge was shut having been carelessly left in that position on the previous day when the mountings were overhauled for survey. Directly the cock was opened the water disappeared from the gauge glass and the Second Engineer admitted that he had blown down the boiler in order to lower the water level as the glass was full.

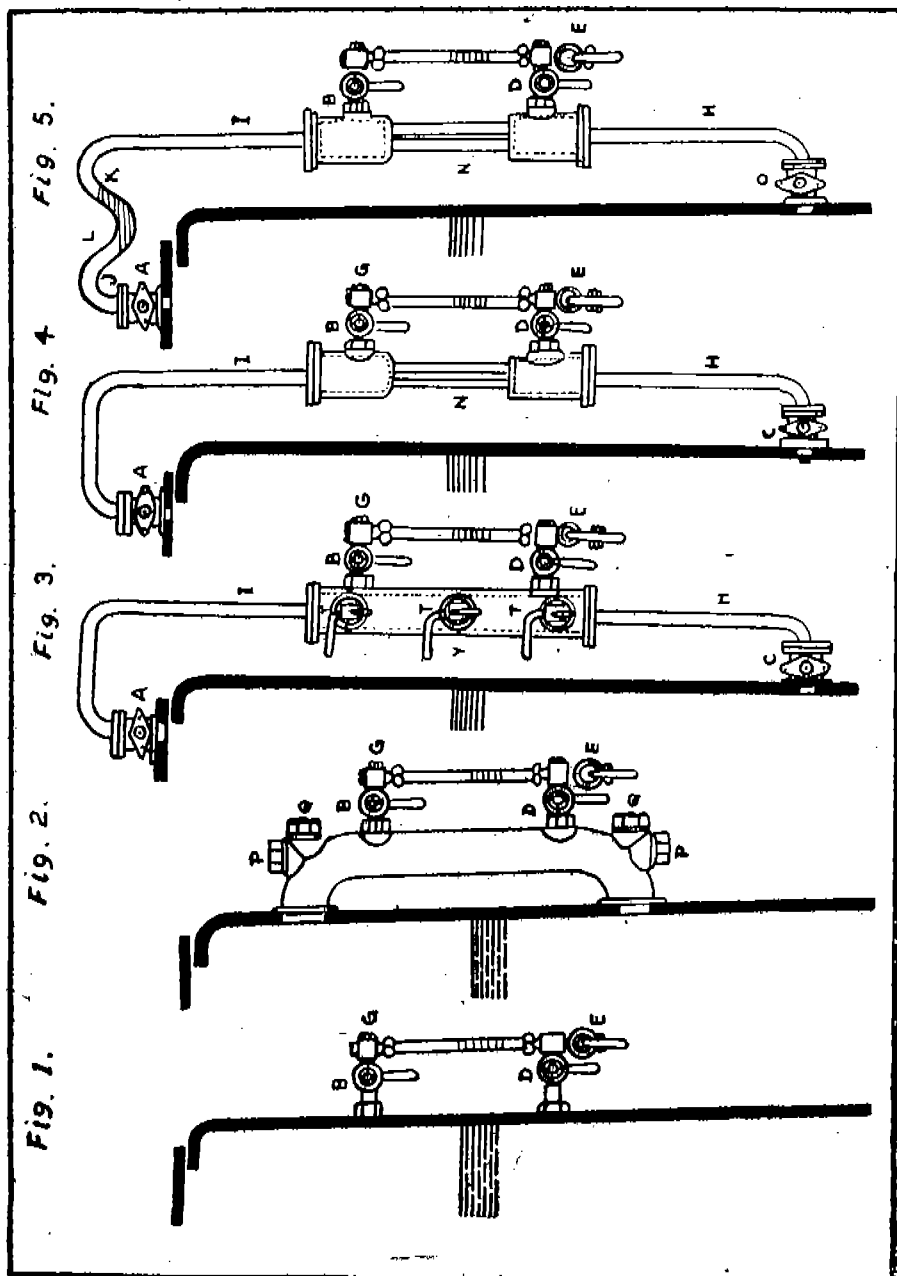
Many steamers have had their furnaces brought down at sea in a similar manner to the above through what the engineers of the watch have called "false water in the glass" and which on examination has been found to result from the top communication being choked.

These casualties resulted from what, to say the least, was bad management, not false water.

Unless candidate under examination is able to prove that he understands how to verify the indications of the water gauge, he should not be passed in practical knowledge and as failure in practical knowledge involves the candidate, going to sea for another 3 months before being eligible for re-examination, the Examiner should explain to such candidate his error after failing him in order to prevent further casualties resulting from his want of knowledge of this subject.

The sketches, Figures 1, 2, 3, 4 and 5 Plate I, represent the usual methods of attaching water gauge mountings to marine boilers. The important features in each gauge and the method of verifying its indications are dealt with separately in the following remarks:—

PLATE I.



Referring to Figure 1 only

In this case the water-gauge cocks are attached direct to the boiler and the accuracy of the gauge when the boiler is under steam can be tested as follows:—

First.—Let B remain open, then close cock D and open cock E and if steam issues it proves that cock B and the passage through the top fitting and gauge glass are clear. If no steam or water issues either cock B or the passage through the top fitting and gauge glass is choked and the gauge cannot act properly until the obstruction is removed.

Second.—Close cock B and open D and E, and if water issues cock D is clear. If no water or steam issues, either cock D or the passage from the boiler through the lower fitting is choked and must be cleared before the gauge can act properly.

Referring to Figure 2 only.

In this case the gauge cocks are attached to a bent pipe of comparatively large diameter (atleast 3 inches in the bore), the upper end of which communicates with the steam space and the lower end with the water space of the boiler. Owing to the bore of the pipe being large it is not liable to become choked or stopped under the ordinary conditions of working. The water gauge is therefore in practically the same condition as if it were attached direct to the boiler as in fig. 1. This gauge when at work is tested in precisely the same manner as the one shown in fig. 1.

Screw plugs are inserted at P. P. and Q. Q. by the removal of which the ventures in the pipe can be cleared, if necessary by the insertion of a wire or rod when steam is down.

Referring to Figure 3 only.

In this case there is an open communication from A to C through the column Y and in order to "blow through the glass" it is only necessary to shut cocks D and B alternately keeping E open. But to "blow through the water gauge" including the pipes H and I, it is necessary, after blowing through the glass as described above to shut A and C alternately at the same time keeping B, D and E open for such time as will ensure the complete discharge of the contents of the gauge and its connections. When B, D and C are clear and A choked the steam lodging in the glass and in the pipe I leading from column Y to A becomes condensed and the water flowing through C to take its place rises in column Y and in the glass to a level above that of the water in the boiler. In other words the gauge shows a false level. If now E be opened and water is blown out, then on E being again closed the water in the gauge will rise higher than before and be still further misleading. On the other hand when B, D and A are clear and C choked, the water, if any, in the glass is trapped and no longer rises and falls with the water in the boiler or with the motion of the vessel, it however, slowly rises in the glass owing to the condensation of the steam in the upper part of the gauge until such time as E is opened when the whole of the water in the glass is blown out and on E being closed the glass does not show any water notwithstanding that the water in the boiler may be at the proper level. When the test cocks T T T are attached to column Y as shown in fig. 3 they cease to be reliable when either Cock A or C or the pipe in connection therewith is choked or nearly choked.

Referring to Figure 4 only.

Sometimes the water gauge fittings are arranged as shown in figures 4 and 5 with no passage up the column, the central portion (N) of the column being simply a pillar or connecting piece of any convenient section between the upper and lower portions to which the cocks B and D are attached.

By this arrangement double communications are obviated and there is no need or what is known as "double shut off" in testing the accuracy of the gauge. When however the gauges are constructed in this manner the cocks B and D are unreliable at test cocks in the event of there being no glass in the gauge. This feature should be carefully noted. Moreover, when in working condition the reduction of pressure in the glass which arises when E is opened causes the water in pipe H to rise above its normal level. This objectionable feature should also be noted.

Referring to Figure 5 only.

Sometimes there is a bend L in the steam pipe. I, leading from cock A to cock B. This has occasionally escaped observation when new boilers have been fitted on board ship. In most cases this bend rises from the pipe being led in an abnormal

direction to escape other pipe beams or fittings near the smoke box. With such a bend the condensed steam collects in the pipe and falls to the bottom of the bend and in time it completely fills the pipe from J to K. The steam from K down to the level of the water in the glass is thereby trapped and, as condensation proceeds, leads to a reduction of pressure in the pipe below that of the boiler and an equivalent rise of the water in the bend and also in the gauge glass. When the vessel is quiescent the water in the gauge glass increases in height until cock E is opened or until the pressure in the boiler is so much in excess of that in the lower part of pipe I, as to cause the water in the bend to be blown into the gauge glass. In either case instantaneous change to water level in the glass ensues.

In the ordinary course of working the phenomenon described above is more or less modified by the presence of air in the upper part of the gauge and by the rise and fall of the water in the boiler and gauge glass arising from the rolling or pitching motions of the vessel.

Other Special Points to be noted.

When the cocks A and C are omitted as in Fig. 2 it is owing to the bore of the stand pipe being sufficiently large to enable it to be regarded as part of the boiler. Such pipes require, however to be examined and cleared at intervals by passing a rod through the holes provided for the purpose at P.P. and Q.Q.

Cocks at A and C are not necessary for the testing of the gauges arranged as shown in figures 4 & 5. Examiners ought, however to make sure that candidates are aware of the impossibility of testing the reliability of the indications of water gauges arranged as in figure 3 when the cocks A and C are absent and of the effect which the choking of cock A or C or pipe H or I has on the indications of the test cocks T.T.T. attached to column Y.

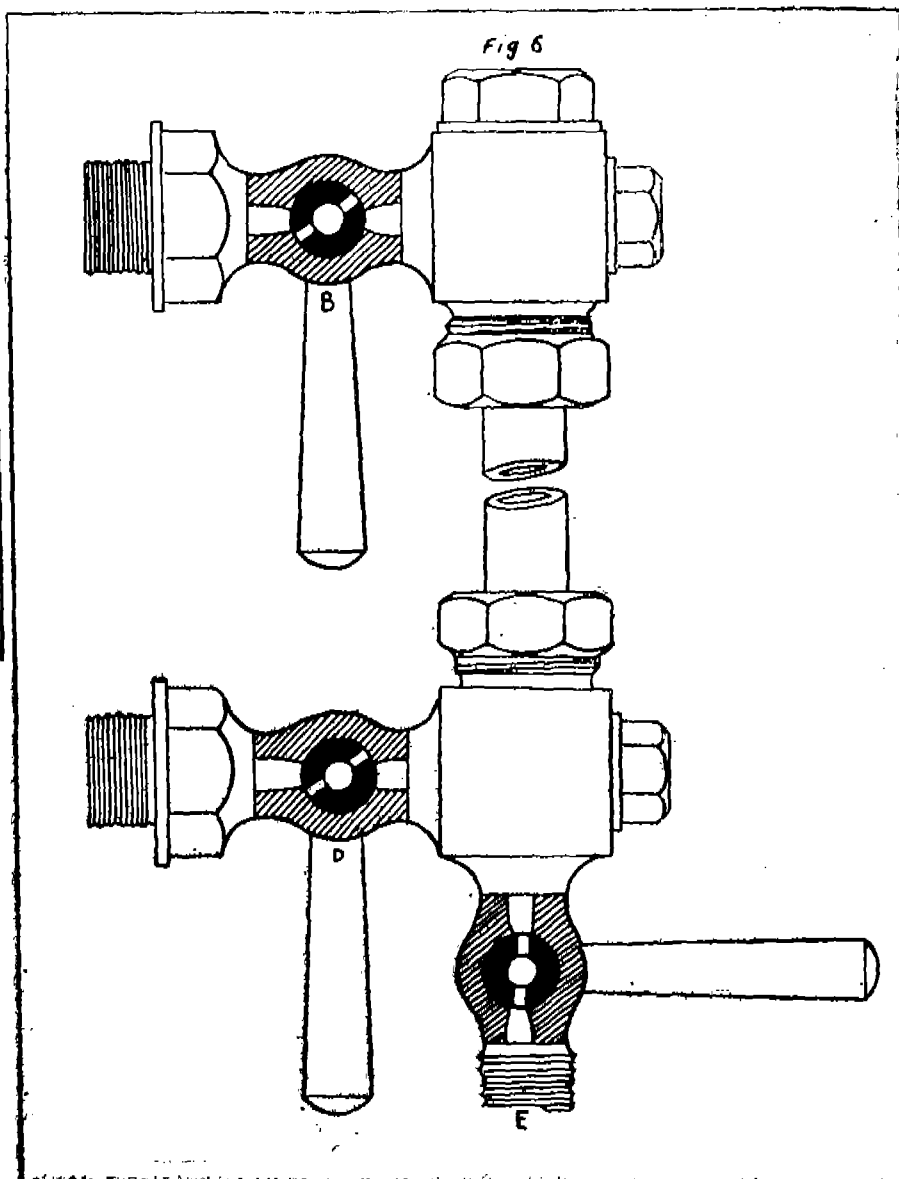
Probably more than half the steamers afloat are fitted with water gauges as shown in figures 3 and 4 and it is therefore specially important that Engineer candidates should thoroughly understand their construction, the principle on which they act, and the steps which must be taken to keep them in an efficient condition.

When fitting a gauge glass into its place it is specially important that it should not be placed so high as to prevent a clearing rod being inserted at G figures 1, 2, 3, 4 and 5. This defect, especially if it occurs in a water-gauge attached to a boiler subject to priming, permits a rapid accumulation of scum around the top of the glass and results in the choking of the orifice leading from cock B to the gauge glass in each of the figures.

When a gauge glass is too short or is placed either too high or too low in the fittings, it is also liable to become choked by the packing material being forced over its ends by the glands whilst being screwed up.

The use of unsuitable or insecure internal pipes in connection either with the ordinary glass gauge cocks of the description shown in figure 1 or with test cocks which are joined to the boiler itself should also be carefully guarded against.

PLATE 2.



Boiler casualties have resulted from the cocks B and D having the parts wrongly placed as shown in figure 6, plate 2. In one case of the kind, the Engineer in testing the water-gauge omitted to see that the passages in the cocks B and D were clear when the handles were in their proper working position. This defect could easily have been discovered if proper attention had been paid to the condition of the cocks. A defect of this nature may be due to faulty construction originally or to the handle of the cock having been overstrained and the neck twisted. Whether the passages in the plugs are fair and clear can, however, be verified in a few minutes. As an illustration, the water cock D, figure 6, plate 2, can be verified by blowing through E with B shut and then moving the handle of D to one side until it is just closed and then to the other side until it is again just closed, the proper working position of the handle is about equally distant from each of the above position. The other cocks can be verified in the same manner.

Another serious casualty occurred through the handle of the cock A figure 3, having been twisted from its original position relatively to the orifice of the cock, resulting in the cock being shut when apparently open.

When a water-gauge, that is clear in all its parts, has been thoroughly blown through, the water in the glass rises above the level at which it formerly stood, immediately the drain cock E is closed, but if left undisturbed for a time it gradually falls to its former position. The amount of rise which occurs on these occasions depends chiefly on the temperature of the contents of the boiler and on the length of the pipes by which column Y is connected top and bottom to the boiler but in cases where the gauge is of the description illustrated in figures 3, 4 and 5, it amounts in high pressure boilers to about 4 inches, while the time occupied by the water in returning to its former level ranges from 30 to 40 minutes. The cause of this rise is twofold, namely, (a) the displacement of the comparatively cold water in pipe H by hotter and proportionately lighter, water from the boiler and (b) a slight condensation of the steam and a corresponding fractional reduction of pressure in pipe I. The cause of the gradual subsidence of the water in the glass to its former level is also of a dual character, namely, (a) the cooling of the water in pipe H and (b) the diminution in the condensation of steam in pipe I owing to the collection therein of air released from the steam condensed.

These results will however be somewhat modified if the water in the boiler is of higher density than in pipe H and this will nearly always be the case owing to the condensation of the steam in the glass and upper fittings of the water gauge, causing the water in the lower part to be fresher than that in the boiler.

The Examiner should impress upon candidates the necessity for periodically blowing through the water gauge on each boiler (no matter what the form may be) in a systematic and thorough manner and in cases where a boiler is fitted with two water-gauges of keeping both in constant use; finally, he should further impress upon them the necessity for keeping the water gauges well lighted, clean, and in all respects efficient.

APPENDIX D

[See rules 29 (n) & (29) (o)]

Examination in rough working drawing for an Engineer's certificate of competency.

1. The regulations in regard to the qualification of a candidate for an Engineer's certificate of competency specify that

"He shall be required to make an intelligible hand sketch, or a working drawing of some one or more of the principal parts of a steam engine and to mark in without a copy all the necessary dimensions in figures, so that the sketch or drawing could be worked from.

He must be able to state the general proportions borne by the principal parts of the machinery to each other."

2. In accordance with these clauses, a candidate for an engineer's certificate is required to make a rough working drawing of the parts specified. An engineer who has been some years in charge of marine engines and boilers ought to have familiarly in his mind the general construction of at least one set of engines and boilers, say, that set he was last with. Fine drawing is not expected and in the proportions of the parts a wide margin will be allowed, absurd dimensions will be failure in practical knowledge.

3. The drawing must, however, be practically a working drawing, giving a sufficient number of views to show the parts fully—sections, plans, or elevations just as the candidate would require to be supplied to him if he had to make the parts represented to the design of another person.

4. A clear hand sketch showing the construction completely, and fully dimensioned, will be accepted if the candidate prefers this alternative.

5. A portion only of the parts specified may be accepted in place of the whole if that portion is sufficient to show that the candidate has a good practical idea of the construction of the parts and a fair notion of their general proportions or dimensions.

6. Candidates are cautioned not to put on paper what they have not fully considered and deliberately intend to be understood as evidence of what they know about the construction of any part required.

7. The statements given in by a candidate may be in themselves, apparently, of little importance, but, as sample material from which the extent of the candidate's knowledge of engines and boilers is to be inferred, every detail which is glaringly inconsistent with a sound knowledge of the use of the part, or in which an essential consideration has evidently been overlooked, is an important element in the description which the candidate is giving of his own qualifications.

8. The candidate is advised not to begin more than he can clearly finish in the time allowed. An important object in this part of the examination is to ascertain whether the candidate can be trusted to mark all necessary dimensions upon a sketch or a drawing. The test of this is, practically, the making of the part from the sketch without having to supply additional dimensions, and without measuring the drawing. To prove this ability the candidate must fully dimension the parts shown in his sketch or drawing, notwithstanding that the parts may be correctly drawn to scale. A drawing is fully dimensioned when no part of it is left to the option of the party who is to work to the drawing.

9. To prevent misunderstanding, however, when the candidate has been led into showing more of the details than he has time fully to finish, he should name in the statement on the other side, the particular parts which he has fully dimensioned.

10. All dimensions should have lines and parts to indicate distinctly the points between which the dimensions are given.

11. Beware of writing cross dimensions upon centre lines or upon longitudinal dimension lines. This is not an order but a recommendation.

12. The candidate is not expected to design anything, he has merely to sketch or draw something with which he is expected to be already familiar. At the same time he should call attention to any defect in the design of the article or apparatus. Omission to do so will imply want of practical knowledge.

13. Pencil in nothing after half-past 3 all the dimensions, the figures and the darts must be inked in; employ the remaining time in examining the drawing and in inking in any figures which may have been before overlooked and in checking the dimension.

14. Make sure that you will have sufficient room on the drawing sheet to show all the necessary views. You can have another sheet of drawing paper if necessary. All the paper used must be forwarded with the drawing.

Specimen.

Subject for examination in rough working drawing (read the forgoing general instructions).

A common slide valve with its spindle. Show also an outline section of the parts at the cylinder face. Show the provision for connecting the side valve to the spindle.

The candidate is requested to fill up the following and to attach his paper to his drawing:—

Statement by the candidate

The accompanying drawing, made by me this day, without referring to any document and without the assistance of any person, is intended by me to be sufficient for the new construction of the parts above described to fit the places of similar parts which are to be removed. The construction is similar to what I have been with in the steamer———, but the dimensions may be different.*

The diameter of the cylinder is

The stroke of the piston is

The travel of the valve is

The cover at top end on steam side is

The cover at bottom end on steam side is

The lead at top is intended to be

The lead at bottom is intended to be

The inside cover is or

The thickness of the face of valve is

The thickness of the body of valve is

The greatest opening for steam will be

That gives an area equal to one th of the piston

The opening for exhaust when the crank is on the top centre is

That gives an area equal to th of piston

*Run the pen through the words that do not apply.

The length of the connecting rod is	{ ————— }	The candidate may omit this part if he chooses.
The valve will cut off steam on the down stroke at		
The valve will cut off steam on the up stroke at		

It is required that all the parts shall be fully dimensioned in ink, but if owing to want of time this has not been done, the parts not fully dimensioned must be stated, otherwise it will be understood that the candidate considers the dimensions given sufficient.

The parts fully dimensioned are

Date at this day of 19 .
Candidate.

APPENDIX E

(See rule 4)

Application to be examined for a certificate of competency

as <u>Engineer</u>	of a <u>steam vessel</u>	having engine of
<u>Engine driver</u>	<u>moter vessel</u>	
<u>any nominal horsepower</u>	} plying in the port of Vizagapatam.	
<u>less than 100 nominal horsepower</u>		
<u>less than 40 nominal horsepower</u>		
<u>any brake horsepower</u>		
<u>less than 565 brake horsepower</u>		
<u>less than 225 brake horsepower</u>		

NOTE:—This form can be obtained at the office of Principal Officer, Mercantile Marine Department, Madras, free of charge.

Divisions (A), (B), (C), (D), (E) and G) of this paper are to be filled in by the applicant for examination before the said Principal Officer or such official as may be appointed by him in this behalf and handed over to him with the candidate's testimonials and former certificate if any. No remuneration or gratuity whatever must be offered to or received by any officers or servants of the Crown, beyond the fees mentioned in the Regulations. Any officer, messenger or servant of the Government of India who accepts any present or gratuity, shall be immediately discharged from his office and any candidate so offering money shall be regarded as having committed an act of misconduct and shall be rejected and not allowed to be examined for 12 months.

(A) Name etc. of applicant

1. Name at full length.
2. Surname.
3. Father's name.
4. Permanent address, stating town, street and No. of house, and name of person (if any) with whom residing.
5. Date of birth.
6. Where born—
 - (a) town or village and thana
 - (b) country, country or district.

(B) *Particulars of all previous certificates (if any) where issued in the United Kingdom, the British possessions, or elsewhere.*

Number	Compe- tency or service	Grade	Where issued	Date of issue	If at any time sus- pended or cancelled, state by what court or autho- rity	Date	Cause
7	8	9	10	11	12	13	14

(C) *Certificates now required*

15. Grade.

16. Competency or service.

17. Address to which it is to be sent.

(D) *If applicant has failed in a previous examination for the certificate now required, he must here state when and where. If he has not failed, he must state so in writing across this division*

(E) *Declaration to be made by applicant*

I do hereby declare that the particulars contained in divisions (A), (B), (C), (D) and (G) of this form are correct and true to the best of my knowledge and belief, and that the papers enumerated in division (G) and sent with this form are true and genuine documents given and signed by the persons whose names appear on them. I further declare that the statement (G) contains a true and correct account of the whole of my services without exception.

And I make this declaration conscientiously believing the same to be true. Signed in the presence of the Principal Officer, Mercantile Marine Department, Madras District (The name of such official as may be appointed by the Principal Officer under rule 4 on page 71 *ante* may be filled in if necessary).

Date.

Signature of applicant.
Present address.

(F) *Principal Officer, Mercantile Marine Department, Madras District
To Examiner.*

The declaration (E) above was signed in my presence, and the fee of Rs.— has been received by me.

Date.

Signature.

Designation.

(G) *List of testimonials and statement of service on shore and at sea.*
(the testimonials to be numbered consecutively according to the number given in column 21 below).

No. of testimonials (if any)	Where employed or vessel's name	If service on board vessel			Service of applicant						Trade in which employed	Initials of verifier
		Horse-power of engines	Port of Registry and official No. of vessel	Capacity	Date of Commencement	Date of termination	Time employed IN this service					
							Yrs.	Mns.	Day			
21	22	23	24	25	26	27	28	29	30	31	32	

Total service on steam vessels

Total service on shore

Total of above service.

NOTE.—The examiner should fill up divisions (H) and (I) and in all cases as soon as possible forward this paper to the Principal Officer, Mercantile Marine Department, Madras District, Madras. If the applicant passes, his testimonials and previous certificate, if any, must be sent with this paper to the Principal Officer, Mercantile Marine Department, Madras District, Madras. The new certificate and the testimonials shall be delivered to the applicant at the address named in Division (C) 17.

34. Date and place of examination.

35. Insert passed or failed against each item below—

(i) In working out the question

(ii) In the *viva voce* examination.

36. Rank for which passed—

(1) Personal Description of applicant.

37. Height feet inches.

38. Complexion.

39. Personal marks or peculiarities, if any.

40. Colour of—

(i) Hair,

(ii) eyes.

I hereby certify that the particulars contained in divisions (H) and (I) are correct.

This form and the testimonials are forwarded to the Principal Officer, Mercantile Marine Department, Madras District, Madras.

Date.

To

Signature of the examiner.

The Principal Officer, Mercantile Marine Department, Madras District, Madras.

APPENDIX F

(See note under rule 12)

LIST OF APPROVED TECHNICAL SCHOOLS

(I) DAY CLASSES

(a) *Name of School or institution (for seniors)*

Adelaide—School of Mines, Adelaide.

Adelaide—University of Adelaide.

Auckland, N.Z.—University College, Auckland.

Ballarat—School of Mines, Ballarat.

Belfast—Municipal Technical Institute, Belfast.

Benares—Engineering College of the Benares Hindu University.

Birmingham—University of Birmingham.

Birmingham—City of Birmingham Municipal Technical College, Suffolk Street, Birmingham.

Bombay—Victoria Jubilee Technical Institute, Bombay.

Bradford—Municipal Technical College, Bradford.

Brighton—Municipal Technical College, Brighton.

Brisbane—Technical College, Brisbane.

Bristol—Merchant Venturers Technical College, Bristol.

Bristol—University College, Bristol.

Cambridge—University of Cambridge.

Cardiff—The Technical College, Cardiff.

Cardiff—University College of South Wales and Monmouthshire, Cardiff.

Christchurch, N.Z.—(Canterbury College) Christchurch.

Cork—Crawford Municipal Technical Institute, Cork.

Dartmouth—Royal Naval.

Devonport—Royal Naval Engineering College, Devonport.

Dublin—University College, Dublin.

Edinburgh—Heriott Watt College, Edinburgh.

Glasgow—Royal Technical College, Glasgow.

Glasgow—James Watt Engineering Laboratories, Glasgow University.

Hobart—University Hobart.

Huddersfield—Huddersfield Technical College, Huddersfield.

Hull—Municipal Technical College, Hull.

India—Indian Mercantile Marine Training Ship "Dufferin".

Insein—Government Technical Institute, Insein.

Karachi—N.E.D. Civil Engineering College, Karachi.

Lahore—Maclagan Engineering College, Lahore.

Leeds—The University of Leeds.

Liverpool—The Faculty of Engineering, The University of Liverpool, Liverpool.

London—Central Technical College, London, S.W.

London—Battersea Polytechnic, London, S.W.

London—City and Guilds Technical College, Finsbury, London, E.C.

London—East London College (University of London) Mile End Road, London, E.

London—Electrical Standing orders, Testing & Training Institution, Southampton Row, London, W.C.

London—King's College Strand, London, W.C.

London—Northampton Polytechnic Institute, Clerkenwell, London, E.C.

London—Polytechnic School of Engineering, Regent St. London, W.

London—St. Clare's Grammar School, London, S.E.

London—South Western Polytechnic, Madrasa Road, Chelses, London, S.W.

London—University College, Gower Street, London.

Loughborough—Loughborough College, Leicestershire.

Madras—College of Engineering, Guindy, Madras.

Manchester—Manchester Municipal College of Technology, Manchester.

Melbourne—Footsary Technical College, Melbourne.

Manchester—University of Manchester, Manchester.

Melbourne—Swinhourns Technical College, Melbourne.

Melbourne—Technical College (Working Men's), Melbourne.

Melbourne—University of Melbourne.

Natal—Natal University College (Howard College) Durban.

Newcastle-on-tyne—Armstrong College, Newcastle-on-Tyne.

Newcastle-on-Tyne—Rutherford Technical School, Newcastle-on-Tyne.

Newcastle, New South Wales—Technical College, New Castle.

Osborne—Royal Naval College, Osborne.

Oundle—Engineering Department of Oundle School, Northants.

Perth, Western Australia—University of Perth.

Poona—College of Engineering, Poona, Bombay.

Portsmouth—Portsmouth Municipal College, Portsmouth.

Queensland—Technical School, Ipswich, Queensland.

Queensland—University of Queensland.

Salford—Royal Technical Institute, Salford.

Sheffield—University of Sheffield, Sheffield.

Sibpur—Bengal Engineering College, Sibpur.

Southampton—Hartley University College, Southampton.

Sunderland—Sunderland Technical College, Sunderland.

Swansea—Swansea Technical College, Swansea.

Sydney—Technical College, Sydney.

Tonbridge—Engineering Department of Tonbridge School.
 West Ham—Municipal Technical School, West Ham.
 Wigan—Wigan and District Mining and Technical College, Wigan.
 Wolverhampton—Wolverhampton and Staffordshire Technical College.

(b) *Name of school or institution (for juniors)*

Cardiff—City of Cardiff Day Preparatory Technical School, Cardiff.
 Dublin—Pembroke—Day Trades Preparatory School, Ringsend Co., Dublin.
 Exeter—Junior Engineering and Technical School of University College, Exeter.
 Hull—Municipal Technical College, Hull.
 London—Beaufoy Institute, Junior Day Technical School, Lambeth.
 London—Borough Polytechnic Day Technical School for boys, 103, Borough Road, E.C.
 London—Hackney Institute, Junior Day Technical School, Dalston Lane, N.E.
 London—Leyton Engineering and Trade School, Leyton Technical Institute, Leyton, E.10.
 London—London County Council School of Engineering and Navigation, Day Technical School for Boys, Poplar, E.
 London—Paddington Technical Institute, Junior Day Technical School.
 London—Woolwich Polytechnic, Junior Day Technical School.
 Londonderry—Municipal Day Trades Polytechnic School, Londonderry.
 Newport (Mon.)—Newport Technical College and Institute (In reference only to Junior classes) Newport (Mon.).
 Plymouth—Municipal Technical School Junior Day Technical School, Plymouth.
 Smethwick—Municipal Technical School, Junior Day Technical School, Smethwick.

(II) **EVENING CLASSES**

Name of School or Institution

Belfast—Municipal Technical Institute, Belfast.
 Birmingham—City of Birmingham Municipal Technical School, Suffolk Street, Birmingham.
 Brighton—Municipal Technical College, Brighton.
 Bristol—Merchant Venturers Technical College, Bristol.
 Cardiff—City of Cardiff Technical Schools.
 Darlington—The Darlington Technical College, Darlington.
 Derby—The Derby Technical College, Green Lane, Derby.
 Dublin—Bolton Street Technical Institute.
 Dundee—Dundee Technical College, Dundee.
 Edinburgh—Heriott-Watt College, Edinburgh.
 Glasgow—Royal Technical College, Glasgow.
 Greenock—Greenock Technical School, Greenock (Known as Watt Memorial School).
 Huddersfield—Huddersfield Technical College, Huddersfield.
 Hull—Municipal Technical College, Hull.
 Leeds—University of Leeds.
 Leith—Leith Technical College, Leith.
 Liverpool—Municipal Central Technical School, Liverpool, Liverpool.
 London—Battersea Polytechnic, London, S.W.
 London—Borough Polytechnic Institute, 103, Borough Road, London, S.E.
 London—London County Council School of Engineering and Navigation, Poplar, E.
 London—Northampton Polytechnic Institute, Clerkenwell, E.C.
 London—The Polytechnic School of Engineering, 307, 309 and 311, Regent Street, London, W.
 London—South Western Polytechnic Institution, Manresa Road, Chelsea, S.W.
 Londonerry—Municipal Technical School, Londonerry.
 Loughborough—Loughborough College, Leicestershire.
 Manchester—The Manchester Municipal School of Technicology, Manchester.
 Newcastle-on-Tyne—Armstrong College, Newcastle-on-Tyne.
 Newcastle-on-Tyne—Rutherford Technical College, Newcastle-on-Tyne.
 Newport Mon—Technical College and Institute.
 Preston—Harris Institute, Preston.
 Salford—Salford Royal Technical Institute, Salford.

Sheffield—Department of Applied Science, University of Sheffield St. George's Square, Sheffield.

Southampton—Hartley University College, Southampton.

South Shields—The Marine School, South Shields.

Swansea—Swansea Technical College, Swansea.

West Hartlepool—West Hartlepool Technical College.

Wigan—Wigan and District Mining and Technical College.

Wolverhampton—Wolverhampton and Staffordshire Technical College, Wolverhampton.

(III) MARINE TECHNICAL SCHOOLS

Name of the school or institution.

Aberdeen—Robert Gordon's Technical College, Albardeen.

Cardiff—The Technical College, Cardiff.

Dundee—Technical College and School of Art Dundee.

Greenock—Watt Memorial School, Greenock.

Hull—Municipal Technical College, Hull.

Leith—Leith Nautical College, Leith.

Liverpool—Central Municipal Technical School, Byron Street, Liverpool.

London—London County Council School of Engineering and Navigation Poplar, E.

South Shields—The Marine School, South Shields.

(IV) TECHNICAL SCHOOL IN BENGAL AND ASSAM

Senior Technical Schools—

Kanchrapara Technical School.

Calcutta Technical School.

Bengal Nagpur Railway Apprentices' Night School.

Ordnance Technical School, Ishapore.

Junior Technical Schools at the following places—

Barisal	Rajshahi	Khulna	Assam
Mymensingh	Bogra	Vishnupur	Sylhet
Palna	Comilla	Ranpur	Jorhat
Burdwan	Faridpur	Krishnagar	

(V) TECHNICAL SCHOOLS IN MADRAS PROVINCE

Name of school or institution

Bellary—Government Industrial School.

Calicut—Government Industrial School.

Coimbatore—St. Joseph's Industrial School and Press.

Coimbatore—P. S. G. & Sons, Charity Industrial School, Peelamedu.

Dindugal—Church of Sweden Mission Industrial School.

Madras—Government of School of Technology.

Madras—Ramakrishna Mission Industrial School.

Madras—C. N. T. Institute, Vepery.

Madura—Government Industrial School.

Mangalore—Government Trades School.

Tanjore—District Board Industrial School.

III. REGULATIONS FOR THE GRANT OF PERMITS TO ENGINE OR MOTOR DRIVERS OF MOTOR/STEAM VESSELS OF NOT MORE THAN 40 B.H.P./15 NOMINAL HORSEPOWER PLYING IN THE PORT OF VIZAGAPATAM.

1. Permits shall be granted to those persons who pass the requisite examinations and otherwise comply with the requisite conditions. For this purpose arrangements shall be made for holding examinations periodically at the Port of Vizagapatam.

2. The examinations shall be held by the Port Officer Vizagapatam assisted by the Mechanical Superintendent Vizagapatam Port, hereinafter called the examiner. They shall commence early in the forenoon and shall be continued until all the candidates whose names appear on the list of the Principal Officer, Mercantile

Marine Department, Madras District, Madras, hereinafter called the Principal Officer on the day of examination are examined.

3. Candidates for examination shall make their applications in form A below which must be filled in before the Principal Officer or such official as may be appointed by him in this behalf. The form, properly filled in together with the testimonials, of the applicant's service, which must be based on his employer's office records must be lodged with the Principal Officer not later than 3 days before the day of examination.

4. Candidates for examination, in making their application in form A, shall also be required to pay a fee of Rs. 4 to the Principal Officer or such officer duly authorised by him in this behalf.

5. A candidate for a permit must have attained the age of 21 years and must have served in an engineering firm or workshop for at least two continuous years of which not less than 6 months must have been spent in the capacity of an assistant driver in charge of a motor engine or of a fitter.

6. He must pass a VIVA VOCE examination satisfying the examiner that—

- (i) he fully understands the working and management of motor engines and separate use of magnetos, carburettors, water circulating and oil pumps, sparking plugs, etc. and is able to some extent to explain their actual means of operation;
- (ii) he is able to dismantle motor engines and any necessary part of them detect excessive wear or other defect where it exists and correctly reassemble the part;
- (iii) he is able to detect what is wrong in the event of the engine failing to start up or the failure of any accessory part to perform its proper duty;
- (iv) he is able to show how he would act in case of breakdown of any portion of the machinery;
- (v) he is able to show that he fully realises the dangers of fire and understands the precautions necessary to prevent it and what to do when fire actually breaks out.

7. If the candidate passes, the Principal Officer shall issue to him a permit in form B below:

FORM OF APPLICATION

FORM A

Application for a permit to act as Engine or Motor Driver of a Motor/Engine vessel having engines of 40 or less than 40 brake horsepower/15 or less than 15 nominal horsepower plying in the Port of Vizagapatam.

- (1) Name of applicant in full.
- (2) Father's name.
- (3) Permanent address of applicant.
- (4) Date and place of birth of applicant.
- (5) If failed in previous examination, and if so, when and where.

I hereby declare the above statement to be true.

Signature of applicant.

Present address of applicant.

Date at his day of

(6) The above declaration was signed in my presence and the fee of Rs. 4 has been received by me.

Signature.

Designation.

(7) List of testimonials and statement of service:—

No. of testimonials produced	Where employed	Date of commencement of service,	Date of termination of service	Time employed in this service,	Remarks,

(8) Certificate of examiner:—

(a) Date and place of examination.

(b) Passed/Failed.

(9) Personal description of applicant:—

(a) Height.

(b) Complexion.

(c) Personal marks.

(d) Colour of hair.

(e) Colour of eyes.

I do hereby certify that the particulars contained in Nos. 8 and 9 are correct.

This form and the testimonials are forwarded to the Principal Officer, Mercantile Marine Department, Madras District, for issue of a "permit".

Signature of Examiner.

Dated at this day of

FORM B

Permit to take charge of engines of a motor/steam vessel of 40 brake horsepower or less/15 nominal horsepower or less plying in the Port of Vizagapatam.

To

Whereas you have been found, after examination, duly qualified to drive the engines of a motor-vessel or steam-vessel having engines of 40 brake/15 nominal horsepower or under plying in the Port of Vizagapatam, I do hereby grant you this permit.

Given under my hand and seal.

Principal Officer,
Mercantile Marine Department,
Madras District.

This day of 195
No. of permit.
Bearer Son of by caste.
Date of birth.
Place of birth.
Present residence.
Height.
Personal marks.
Signature.

N.B.—Any person other than the owner thereof becoming possessed of this permit is required to transmit it forthwith to the Principal Officer, Mercantile Marine Department, Madras District, Madras.

Issued at on the 19
Registered.

Principal Officer,
Mercantile Marine Department,
Madras District.

[No. 948TG.]

S. K. GUHA, Joint Director, Traffic.

MINISTRY OF FOOD AND AGRICULTURE

New Delhi, the 10th August 1953

S.R.O. 1559.—In pursuance of the provisions of sub-clause (3) of clause I of the Foodgrains (Licensing and Procurement) Order, 1952, the Central Government hereby directs that the said Order shall apply in the State of West Bengal in respect of all foodgrains except (1) wheat and wheat products, (2) paddy and (3) rice.

[No. PYII-652(2)/53.]

P. A. GOPALAKRISHNAN, Joint Secy.

(Agriculture)

New Delhi, the 5th August 1953

S.R.O. 1560.—In pursuance of the provisions of sub-section (1) of section 4 of the Indian Central Oilseeds Committee Act, 1946 (IX of 1946), the Central Government are pleased to nominate Shri K. P. Madhavan Nair, M.P., President of the Cochin State Oil Millers' Association, Ernakulam, to be a member of the Indian Central Oilseeds Committee to represent power oilseed crushing industry with effect from 1st April, 1953.

[No. F.5-2/53-Com-I.]

R. L. MEHTA, Dy. Secy.

MINISTRY OF COMMERCE AND INDUSTRY

TEA CONTROL

New Delhi, the 6th August, 1953

S.R.O. 1561.—In exercise of the powers conferred by sub-section (2) of Section 4 of the Indian Tea Control Act, 1938 (VIII of 1938), the Central Government, on the recommendations of the United Planters Association of Southern India, hereby nominates Mr. A. J. E. Steven, Chokanaad Estate, P. O. Munnar, Travancore, as a member of the Indian Tea Licensing Committee, *vice* Mr. J. S. Allan resigned.

[No. 56(1)Plant(Tea)/53.]

CENTRAL TEA BOARD

New Delhi, the 8th August 1953

S.R.O. 1562.—In exercise of the powers conferred by clause (V) of sub-section (3) of Section 4 of the Central Tea Board Act, 1949 (XIV of 1949), the Central Government is pleased to nominate Shri P. Govindan Nair, I.C.S., Joint Secretary to the Government of India in the Ministry of Commerce and Industry, as a member of the Central Tea Board, *vice* Shri S. Bhoothalingam, I.C.S.

[No. 94(1)Plant/52.]

S. G. RAMACHANDRAN, Dy. Secy.

ORDER

New Delhi, the 10th August, 1953

S.R.O. 1563.—In pursuance of rule 9 of the Central Advisory Council (Procedural) Rules, 1952, made under the Industries (Development and Regulation) Act, 1951 (LXV of 1951), the Central Government ratifies the appointment of each of the substitutes specified in column 2 of the Table below to take the place of the member of the Central Advisory Council of Industries mentioned in the corresponding entries in column 1 of the said Table, for the purpose of the meeting of the Council held on the 29th May, 1953.

TABLE

I	2
Shri G. D. Birla.	1. Shri G. L. Bansal, 28, Ferozeshah Road, New Delhi.
Shri K. C. Mahindra.	2. Shri Keshub Mahindra, C/O Messrs. Mahindra and Mahindra Ltd., Gateway Building, Appollo Bunder, Bombay.

[No. 3(20)IA(G)/53.]

R. N. KAPUR, Asstt. Secy.

MINISTRY OF IRRIGATION AND POWER

New Delhi, the 6th August 1953

S.R.O. 1564.—In exercise of the powers conferred by sub-section (2) of section 36 of the Indian Electricity Act, 1910 (IX of 1910), the Central Government hereby appoints Shri T. N. Idnani, Senior Project Officer, Central Water and Power -Commission (Power Wing) to be an Electric Inspector within the State of Vindhya Pradesh.

[No. EL-II-12(19).]

S.R.O. 1565.—In exercise of the powers conferred by sub-section (2) of section 36 of the Indian Electricity Act, 1910 (IX of 1910), the Central Government hereby appoints Shri T. N. Idnani, Senior Project Officer, Central Water and Power Commission (Power Wing) to be an Electric Inspector within the State of Bhopal.

[No. EL-II-12(19).]

ORDERS

New Delhi, the 6th August 1953

S.R.O. 1566.—In exercise of the powers conferred by section 55 of the Indian Electricity Act, 1910 (IX of 1910), the Central Government hereby authorises the discharge of the functions of the State Government under sections 13 and 18, sub-section (2) of section 34 and sub-clause (2) of clause V and clause XIII of the Schedule to the said Act, in the State of Bhopal by Shri T. N. Idnani, an Electric Inspector.

[No. EL.II-12(19).]

S.R.O. 1567.—In exercise of the powers conferred by section 55 of the Indian Electricity Act, 1910 (IX of 1910), the Central Government hereby authorises the discharge of the functions of the State Government under sections 13 and 18, sub-section (2) of section 34 and sub-clause (2) of clause V and clause XIII of the Schedule to the said Act, in the State of Vindhya Pradesh by Shri T. N. Idnani, Electric Inspector.

[No. EL-II-12(19).]

S.R.O. 1568.—In exercise of the powers conferred by section 55 of the Indian Electricity Act, 1910 (IX of 1910), the Central Government hereby authorises the discharge of the functions of the State Government under section 13 and 18, sub-section (2) of section 34 and sub-clause (2) of clause V and clause XIII of the Schedule to the said Act, in the State of Kutch by Shri T. N. Idnani, an Electric Inspector.

[No. EL.II-12(19).]

KAILASH CHANDRA, Under Secy.

MINISTRY OF HEALTH

New Delhi, the 4th August 1953

S.R.O. 1569.—Corrigendum.—In the notification of the Government of India in the Ministry of Health, No. S.R.O. 1496 dated the 25th August, 1952, published in Part II, Section 3 of the Gazette of India, dated the 30th August, 1952.—

- At page 1357 line 49 for "orders" read "order";
- At page 1358 line 3 for "than" read "then";
- At page 1359 line 39 the word "the" before "payment" shall be deleted;
- At page 1360 line 2 for "numbers", read "members";
- At page 1362 line 16 Figure "(1)" shall be deleted;
- At page 1362 line 18 Figure "(2)" shall be read as figure "(1)";
- At page 1362 line 21 Figure "(3)" shall be read as figure "(2)";
- At page 1362 line 25 for "subject" read "subjects";
- At page 1362 line 27 Figure "(4)" shall be read as figure "(3)";
- At page 1362 line 33 Figure "(5)" shall be read as figure "(4)";
- At page 1363 line 12 Figure "(6)" shall be read as figure "(5)";
- At page 1363 line 18 Figure "(7)" shall be read as figure "(6)";
- At page 1363 line 20 Figure "(8)" shall be read as figure "(7)";
- At page 1363 line 25 Figure "(9)" shall be read as figure "(8)";
- At page 1363 line 29 Figure "(10)" shall be read as figure "(9)";
- At page 1363 line 33 Figure "(11)" shall be read as figure "(10)";
- At page 1363 line 35 Figure "(12)" shall be read as figure "(11)";
- At page 1364 line 46 for "the" before the word 'requisition' read "a";
- At page 1365 line 10 for "post" read "posts";
- At page 1366 between lines 11 and 12 insert as heading
"Appendix 'B' [See regulation 73(2)]"
- At page 1366 line 12 the figure "11" shall be deleted.

[No. F.7-16/53-DS.]

New Delhi, the 8th August, 1953

S.R.O. 1570.—In exercise of the powers conferred by sub-sections (1) and (2) of section 7 of the Drugs Act, 1940 (XXIII of 1940), the Central Government hereby directs that the following further amendment shall be made in the notification of the Government of India, in the Ministry of Health No: F. 1-3/47-D(II), dated the 13th September, 1948, constituting the Drugs Consultative Committee, namely:—

In the said notification, under the heading 'Nominated by State Governments' for entry 8, the following entry shall be substituted, namely:—

"(8) Dr. V. L. Narasimha Rao, M. Pharm., Drugs Inspector for the State of Orissa."

[No. F.4-6/53-DS.]

S. DEVANATH, Under Secy.

MINISTRY OF REHABILITATION

ORDER

New Delhi, the 30th July 1953

S.R.O. 1571.—In exercise of the powers conferred by section 38 and sub-section (2) of section 55 of the Administration of Evacuee Property Act, 1950 (XXXI of 1950), the Central Government hereby authorises the Chief Commissioners of Ajmer, Bilaspur, Bhopal, Coorg and Kutch to exercise within their respective jurisdictions the power of the State Government to grant previous sanction for prosecution under section 38 of that Act.

[No. 42(10) (4)/53-Prop.]

K. P. MISRA, Asstt. Secy.

MINISTRY OF COMMUNICATIONS*New Delhi, the 10th August, 1953*

S.R.O. 1572.—In exercise of the powers conferred by rule 53 of the Indian Air craft Rules, 1920, the Central Government hereby declares the aerodrome at Bhuj, (RUDRAMADA), to be a customs aerodrome, and appoints, (1) the Collector of Central Excise, Baroda, to be the Chief Customs Officer, and (2) the Assistant Collector of Central Excise, Jamnagar, and the Superintendent of Central Excise, Kutch, Bhuj, to be Customs Collectors for the purposes of the said Rules at the said customs aerodrome.

[No. 10-A/29-51.]

K. V. VENKATACHALAM, Dy. Secy.

MINISTRY OF TRANSPORT**MERCHANT SHIPPING***New Delhi, the 10th August, 1953*

S.R.O. 1573.—The Central Government hereby declares—

- (a) in pursuance of clause (a) of section 213B of the Indian Merchant Shipping Act, 1923 (XXI of 1923), that the Governments of the countries specified in Schedule I to this Notification have accepted the Safety Convention as defined in clause (d) of section 213-A of the said Act, that is to say, the Convention for the safety of Life at Sea, signed in London on the tenth day of June, nineteen hundred and forty-eight, as amended from time to time; and
- (b) in pursuance of clause (b) of the said section 213B, that the Safety Convention aforesaid extends to the territories specified in Schedule II to this Notification.

SCHEDULE I*Names of countries.*

- 1. United Kingdom,
- 2. New Zealand,
- 3. United States of America,
- 4. France,
- 5. Netherlands,
- 6. Sweden,
- 7. Norway,
- 8. Union of South Africa.
- 9. Iceland,
- 10. Portugal,
- 11. Canada,
- 12. Pakistan,
- 13. Denmark,
- 14. Yugoslavia,
- 15. Italy,
- 16. Belgium,
- 17. Israel,
- 18. Japan,
- 19. Philippines,
- 20. India,
- 21. Spain,
- 22. Liberia.

SCHEDULE II*Names of territories.*

- 1. Alaska, Hawaii and Puerto Rica.
- 2. Spanish Protectorate of Morocco and the Spanish Colonies.
- 3. Hong Kong.

[No. 46-MA(26)/49.]

S. K. GHOSH, Dy. Secy.

PORTS

New Delhi, the 11th August, 1953

S.R.O. 1574.—In exercise of the powers conferred by section 18 of the Calcutta Port Act, 1890 (Bengal Act III of 1890), the Central Government is pleased to authorise the Commissioners for the Port of Calcutta to raise on the 14th August, 1953, two debenture loans of Rs. 50 lakhs (Rupees fifty lakhs). The first loan shall be repayable on the 14th August, 1963, and the second loan shall be repayable on the 14th August, 1983.

2. The entire amount of both the loans will be taken up by the Commissioners' Reserve Funds in accordance with the provisions of sub-section (1) of section 24C of the said Act.

[No. 9-PI(108)/53.]

K. NARAYANAN, Under Secy.

MINISTRY OF WORKS, HOUSING AND SUPPLY

New Delhi, the 7th August 1953

S.R.O. 1575.—In exercise of the powers conferred by sub-section (1) of section 17 of the Requisitioning the Acquisition of Immovable Property Act, 1952 (XXX of 1952), and clause (1) of article 258 of the Constitution of India, the Central Government hereby directs that the powers exercisable by it by or under sections 6 and 7, by or under section 8, except clause (b) of sub-section (1), and by or under section 13 of the said Act shall be exercisable also by the Deputy Commissioner of Bilaspur, Madhya Pradesh, in respect of any property situated within his jurisdiction.

[No. 4304-EII/53.]

K. K. SHARMA, Dy. Secy.

MINISTRY OF LABOUR

New Delhi, the 5th August 1953

S.R.O. 1576.—In pursuance of section 17 of the Industrial Disputes Act, 1947 (XIV of 1947), the Central Government publishes the following award of the Industrial Tribunal, Bombay in the matter of an application under Section 33A of the said Act from Messrs. Gopala Kundlika, Haribhau Shivram and Ganpa Gabhaji, employees of the Bombay Port Trust, Bombay.

BEFORE MR. S. H. NAIK, INDUSTRIAL TRIBUNAL, BOMBAY

COMPLAINT (IT-CG) No. 1 of 1953 IN REFERENCE (IT-CG) No. 1 of 1952

1. Gopala Kundlika;
2. Haribhau Shivram; and
3. Ganpa Gabhaji—Complainants.

Versus

The Bombay Port Trust, Bombay—Opponent.

In the matter of a complaint under section 33A of the Industrial Disputes Act...

APPEARANCES:

- Mr. Manohar Kotwal for the complainants.
Mr. S. D. Nariman for the opponent.

AWARD

This is a complaint under section 33A of the Industrial Disputes Act, 1947. The complainants belong to a category known as 'A' category under the Decasualization Scheme of the Bombay Port Trust. They state that according to the provisions of the Decasualization Scheme they are entitled to claim attendance allowance if they attend the Call Stand in the morning and remain present there till 9 A.M. On the 6th February 1953, it is alleged, the complainants who were

assigned for day shift reported for work at the Hamallage Office, but they were told that no work could be offered to them and that they should again report in the evening to see if any work would be available to them in the night shift. They were not paid their usual attendance money when they attended the call stand in the morning though no work was available to them. This is contrary to the Scheme. On the 7th February 1953 they were told that they lost their claim for work on that day as they had not reported for duty in the evening on the 6th February. According to the rules of rotation such workers who cannot be offered work on any day are to be given priority for work the next day. The Port Trust did not comply with this rule and, contrary to it, they gave work on the 7th to those who had already been given work on the 6th. The complainants allege that the Port Trust authorities have thus committed a breach of the conditions of their service. They therefore pray that such orders as may be deemed proper may be passed in these proceedings.

2. The Port Trust contends that on a proper interpretation of clause 3(b) of the Bombay Port Trust Scheme for Direct Employment of Dock Labourers, it would be found that labourers in 'A' and 'B' categories are entitled to attendance money only if no work could be found for them both in the first and the second shifts and therefore a labourer who fails to secure work in the first shift and fails to report for work in the second, does not become entitled to the attendance allowance. Let us see how far the provisions of the Scheme bear out the respective contentions of the parties.

3. The short point at issue is whether it is necessary for the 'A' and 'B' category labourers, who form the registered labour force of the Port Trust, to attend call stands at the beginning of the first shift as well of the second in order to entitle them to the attendance allowance, as maintained by the Port Trust, or whether they are entitled to such allowance if they attend the call stand only in the morning. In order to decide this point we must scan the provisions of clause 3(b) under the heading Category 'A' and under the heading Category 'B' and also clause 8 under the heading "Call Stand for Labourers". Under clause 3(b) 'A' category workers are entitled to attendance money for days when no work can be offered including Sundays and 'B' category workers are entitled to it for days when no work can be offered. The relevant portion of clause 8 reads as follows:

"Labourers entitled to and claiming Attendance Allowance should register their attendance at the stands and remain present at least till 9 A.M. All labourers will muster at the stands in the evening to receive orders for night and/or for the following day."

4. It was argued by Mr. Nariman for the Port Trust that the use of the word "days" in clause 3(b) shows that the labourers have to register their attendance in both the shifts, that is, the first and the second shifts, in order to earn the attendance allowance. I am not prepared to accept the construction put by him on the word "days". The word "days" in the above clause appears to have been used for a "shift". The first shift of the Port Trust is known as the *day* shift and the second as the *night* shift. It is usual for an industrial concern to have one shift a day and night shift and a third shift are not its normal features. It cannot be contended that if a concern has three shifts in the course of twenty-four hours, the workers must attend at the beginning of each of the three shifts to earn attendance allowance.

5. Now coming to the relevant portion of clause 8 it is clear that labourers who register their attendance at the call stands in the morning and remain present till at least 9 A.M. are entitled to the attendance allowance. The expression "till at least 9 A.M." makes it sufficiently clear that the labourers who register their attendance in the morning and remain present till the stated time become entitled to the attendance allowance. There is nothing in this clause which requires the labourers to register their attendance both in the morning and in the evening to entitle them to the allowance.

6. Mr. Nariman invited my attention to the latter part of the clause referred to above and stated that as that clause requires all labourers to muster at the stands in the evening to receive orders for night and/or for the following day, it is clear that unless the labourers register their attendance both in the morning and in the evening they are not entitled to the attendance allowance. I think the meaning of the portion of clause 8 quoted above is sufficiently clear. The first part of it lays down the condition necessary for the labourers to earn their attendance allowance. The second part of it requires the labourer to attend the call stands in the evening to receive orders for the night shift and for work the next day. Those of the labourers who are content to receive mere attendance allowance have to attend in the morning and remain present there till 9 A.M. If they

do so, and if no work is available to them, they become entitled to their attendance allowance. If they want work and not mere attendance allowance they must attend in the evening.

7. The practice in the Bombay port till March 1950 was for labourers to attend only in the morning and not in the evening to earn attendance allowance (see the correspondence annexed to Ex. A). The Decasualization Scheme was started in November 1948 and both the parties read and understood the clauses in the Scheme concerning earning of attendance allowance in the above sense. I cannot therefore accept the interpretation put by the Port Trust on the relevant clauses of the Scheme.

8. The question then arises as to whether the present complaint is tenable under section 33A of the Industrial Disputes Act, 1947. That section refers to the contravention by an employer of the conditions of service of an employee applicable to him immediately before the commencement of adjudication proceedings. The Central Government referred the dispute between the Port Trust and its employees to me by their order dated the 23rd July 1952. But long before the reference was made, that is, in March 1950, the Port Trust had decided to pay attendance allowance if the labourers attended the call stands both in the morning and in the evening. This condition was imposed in the teeth of opposition by the Union. Payment of attendance allowance on that condition has continued till now. It cannot therefore be said that the Port Trust contravened, during the pendency of adjudication proceedings before me, the service conditions of the complainants as applicable to them immediately before the commencement of those proceedings. The complaint is not tenable in that view and is therefore dismissed.

Bombay, the 25th July, 1953.

(Sd.) S. H. NAIK, *Industrial Tribunal.*

(Sd.) K. R. WAZKAR, *Secretary.*

[No. LR.2(325).]

S.R.O. 1577.—In pursuance of section 17 of the Industrial Disputes Act, 1947 (XIV of 1947), the Central Government publishes the following award of the Industrial Tribunal, Bombay, in the matter of an application under Section 33A of the said Act from Messrs. Kashinath Banudas Bhogil, Genu Tukaram Ghopde, Gulab Pandu Kamble and Ganpat Kisan Ghadge, employees of the Bombay Port Trust, Bombay.

BEFORE MR. S. H. NAIK, INDUSTRIAL TRIBUNAL, BOMBAY

COMPLAINT (IT-CG) No. 1 of 1952 IN REFERENCE (IT-CG) No. 1 of 1952

1. Kashinath Bhanudas Bhogil;
2. Genu Tukaram Ghopde;
3. Gulab Pandu Kamble; and
4. Ganpat Kisan Ghadge—*Complainants.*

Versus

The Bombay Port Trust, Bombay—Opponent.

In the matter of a complaint under section 33A of the Industrial Disputes Act.

APPEARANCES:

Mr. Manohar Kotwal for the complainants.

Mr. S. D. Nariman for the opponent.

AWARD

This is a complaint made by four of the employees of the Bombay Port Trust under section 33A of the Industrial Disputes Act, 1947. The complainants are shore workers and belong to the category known as 'B' category under the Decasualization Scheme of the Port Trust. They state that the shore workers are always booked by the Port Trust authorities gangwise and they had been attached to the 'A' category gangs. Since 7th September 1952, however, they allege, they were removed from their gangs which were booked for Sunday work and they were sent home without giving any work for that day. The complainants further allege that when 'A' category workers' gangs are booked for 'Bharoot' work 'B'

category workers from those gangs are taken out from their regular gangs and put in some other gang. The complainants' grievance is that such removal of workers from their regular gangs either for work on Sundays or for 'Bharoot' work was never done in the past and is a definite departure from the existing practice. The complainants therefore pray that the necessary action may be taken for the breach of the practice referred to above.

2. The Port Trust has denied the allegations made by the complainants and stated that it has not made any departure from the practice obtaining prior to the reference of the dispute to me.

3. In order to decide the point at issue we have to refer to the relevant provisions of the Decasualization Scheme dated the 14th September 1948. According to that scheme the shore labour is divided into two categories, namely, category 'A' and category 'B'. Category 'A' consists of non-scheduled permanent employees and category 'B' of casual employees. The number of labourers to be employed from the 'B' category depends on the daily requirements of the Port Trust. The 'A' category workers are entitled to attendance money at 12 annas per day for days when no work can be offered including Sundays. There is no similar provision for payment of attendance money to 'B' category workers for attendance on Sundays. The relevant clause in the Scheme states that the 'B' category workers are entitled to an attendance money of 6 annas per day for days when no work can be offered. The words "including Sundays" which appear in the clause relating to the payment of attendance money to 'A' category workers do not appear in the relevant clause pertaining to 'B' category workers. From this it appears that there is no obligation on the part of the 'B' category workers to attend the booking office on Sundays.

4. Mr. Nariman who appeared in these proceedings on behalf of the Port Trust stated that according to the Scheme there is no contractual obligation on either side for attendance of 'B' category workers on Sundays. If the Port Trust requires the services of 'B' category workers on Sundays they are bound to pay $1\frac{1}{2}$ times their normal rates of wages. The complainants cannot therefore make a grievance saying that they have a right to work even on Sundays with the gang of 'A' category workers to which they may be attached.

5. Furthermore, according to the Decasualization Scheme, 'A' category workers have a preferential right to employment over 'B' category workers. The 'B' category workers being casual labourers can only be employed when there is employment for all 'A' category labourers and their number is exhausted. The 'B' category workers cannot, therefore, claim a right to work on Sundays if there are 'A' category labourers available for work on such days.

6. Under clause 5 of the Scheme 'Bharoot' work is to be assigned to 'A' category workers. The 'B' category workers cannot therefore claim a preferential right over 'A' category workers for such work. It is only when there are vacancies in a gang of 'A' category workers that the Port Trust can fill up such vacancies by engaging 'B' category workers. An individual or a number of 'B' category workers cannot, according to the Scheme, claim to have been attached to a particular gang of 'A' category workers.

7. I think therefore that the practice set up by the complainants is against the letter and spirit of the Decasualization Scheme. It does not therefore lie in the mouth of the Union which insists on the Scheme being given effect to by the Port Trust to set up a practice which is contrary to it. The complainant have adduced no evidence to prove that the practice set up by them in their complaint was in vogue prior to the reference of the dispute to me by Government. The complaint is therefore dismissed.

Bombay, the 25th July 1953.

(Sd.) S. H. NAIK, *Industrial Tribunal.*

(Sd.) K. R. WAZKAR, *Secretary.*

[No. LR.2(325).]

S.R.O. 1578.—In pursuance of section 17 of the Industrial Disputes Act, 1947 (XIV of 1947), the Central Government publishes the following award of the Industrial Tribunal, Dhanbad, in the matter of an application under section 33A of the said Act, from Shri P. Jha, and eight other workmen of the West Bokaro Colliery.

CENTRAL GOVERNMENT INDUSTRIAL TRIBUNAL AT DHANBAD

APPLICATION No. 52 of 1952

(Arising out of Reference No. 6 of 1952)

In the matter of an application U/S 33A of the Industrial Disputes Act, 1947.

PRESENT:

Shri L. P. Dave, B.A., LL.B.—*Chairman.*

PARTIES:

Shri P. Jha and eight other workmen, West Bokaro Colliery, P.O. Ghatotand, Dist. Hazaribagh.—*Applicants.**Versus*Deputy Agent, West Bokaro Colliery, P.O. Ghatotand, Dist. Hazaribagh.—*Opposite Party.*

APPEARANCES:

Shri M. V. Desai, General Secretary, Koyala Mazdoor Panchayat, Jharia, Dist. Manbhum.—*For the Applicants.*Shri J. Prasad, c/o West Bokaro Colliery, P.O. Ghatotand, Dist. Hazaribagh.—*For the Opposite Party.*

AWARD

This is an application under Section 33A of the Industrial Disputes Act, 1947.

2. It was filed by nine workmen who were working in the West Bokaro colliery alleging that they were suspended from their work from 6th September 1952 and that all payments were stopped to them. They contended that this order was passed in violation of Section 28 of the Coalmines Standing Orders and no opportunity was given to them to explain their conduct. They further urged that the opposite party was thus guilty of a breach of Section 33 of the Industrial Disputes Act 1947 because of the pendency of Reference No. 6 of 1952 and therefore they filed the present application.

3. By its written statement the opposite party denied the allegations made in the application and urged that the applicants along with others were found to be involved in rioting and other disorderly conduct on 3rd August 1952 and that they were taken into custody by police and proceedings under Section 107 Cr.P.C. were started against them. They therefore urged that this suspension of the applicants was proper. The opposite party further urged that later on the applicants have been dismissed from service.

4. The matter was heard by me on 26th June 1953 and adjourned for passing orders. On 10th July 1953 an application was given to me by the parties stating that the matter was amicably settled between them and the applicants therefore wanted to withdraw the application. A copy of the terms of the settlement was also produced before me. This application was signed by five of the workmen and also by the management. The other four workmen were not present and the parties requested me to keep over the matter till 21st July. On that date a request was made to adjourn the matter till today. Applications were put in today before me signed by the three of the remaining workmen and the representative of the fourth workman stating that the matter had been settled amicably between them and they wanted to withdraw the application. Thus all the applicants who filed the present application said that they wanted to withdraw the application because there has been an amicable settlement. Under the terms of the compromise, two of the workmen have to be reinstated with effect from 15th May 1953, while in respect of the other workmen, they would be paid all their back wages upto date and they have agreed to forego the claim of reinstatement. An application under Section 33A of the Act is an individual and personal application and is made by an aggrieved workman. Such a workman has also the right to withdraw the application made by him. In the present case all the applicants now desire to withdraw the application.

5. In the circumstances, the application is allowed to be withdrawn and I pass my award accordingly.

The 27th July 1953.

(Sd.) L. P. DAVE, *Chairman.*

[No. L.R.2(365).]

ORDER

New Delhi, the 5th August 1953

S.R.O. 1579.—Whereas the Central Government is of opinion that an industrial dispute exists between employers in relation to each of the banking companies specified in column 3 of the Schedule annexed to this Order and the workman or workmen specified in the corresponding entry in column 2 thereof;

And whereas the Central Government considers it desirable to refer for adjudication the matters specified in column 4 of the said Schedule, which are matters in dispute;

Now, therefore, in exercise of the powers conferred by section 10 of the Industrial Disputes Act, 1947 (XIV of 1947), the Central Government hereby refers to the Industrial Tribunal at Calcutta constituted under section 7 of the said Act for adjudication each of the said matters specified in column 4 of the said Schedule, being a matter between the employers in relation to the banking company specified in the corresponding entry in column 3 of the said Schedule and the workman or workmen specified in the corresponding entry in column 2 thereof.

SCHEDULE

S. No.	Names of the Workmen	Name of the Employer	Nature of Dispute	Addresses of the Workmen
1	2	3	4	5
1.	Shri Manmohan Ghosh	Comilla Banking Corporation.	Denial of leave from 1942 to 1945.	"Brojo Dham" 24/5/1, Masjid Bari St., Calcutta-16.
2.	Shri Jamna Pandhya	United Commercial Bank.	Discharge from service.	C/o Shri K. N. Sharma Waste Paper godown 4B, Machua-bazar St., Calcutta.
3.	Shri Jainath Ram	Do.	Do.	C/o Shri Harnath Ram United Commercial Bank Ltd., Calcutta.
4.	Shri Mufhar Ali	Do.	Do.	119, Collin Street, Calcutta.
5.	Shri Abdul Majid Mia	Do.	Do.	119, Collin Street, Calcutta.
6.	Shri Radha Kissen Tewari	Do.	Do.	C/o Kedarnath Dubey Tarachand Ghan-shyam Dass, 18, Mullick St., Calcutta
7.	Shri Shivji Singh	Do.	Do.	P.O. Tollygunje, Bansdroni Ghat Khanpur Khatal. Distt. 24 Pargana, (West Bengal)
8.	Shri Ram Prasad	Do.	Do.	1/6/1, Justice Dwarka Nath Road, Calcutta-20
9.	Shri Kumud Bandhu Chatterjee	Hindustan Commercial Bank.	Do.	44/1-H, Kalighat Road, P. O. Kalighat, Calcutta.
10.	Shri Krishna Bahadur	Imperial Bank of India.	Non-payment of bonus.	C/o Calcutta Electric Supply Corporation, 33, Amir Ali Avenue, Calcutta.
11.	Shri Dalim K. Chatterjee	Do.	Suspension from service.	3, Chaital Para, P.O. Bally Distt. Howrah
12.	Shri Dasharathi Dutta	Chartered Bank of India, Australia and China.	Stoppage of promotion.	65, Ratan Sarkar. Garden Street, Calcutta.
13.	Shri Gopi Nath Dutta	Do.	Do.	C/o Sunder Lal Seal Eng., Sastitolla Chinsurah, Distt. Hooghly.

1	2	3	4	5
14.	Shri Dulal Chandra D	Chartered Bank of India, Australia and China	Stoppage of promotion	39. Baburam Ghosh Lane, Calcutta.
15.	Shri Tarini Kumar Adhiya	Do.	Do.	23, Umesh Banerjee, Lane, Howrah.
16.	Shri Broja Gopal Seal	Do.	Do.	Borai Chandito Chandernagore.
17.	Shri Biswa Nath Dutta	Do.	Do.	Mansatolla, Tola Phatak. Chensurah, Distt. Hooghly.
18.	Shri Kartick Chandra Paul	Do.	Do.	Kamsrapa, Chinsurah, Distt. Hooghly.
19.	Shri Jagadindra Kumar Dutta	Do.	Do.	Village Majilpur, P.O. Joynagara Mazilpur, Distt. 24-Paraganas.
20.	Shri Gour Chand Mallick	Do.	Do.	74-B, Sikdar Bagat Street, Calcutta.
21.	Shri Akhil Chandra Das	Bengal Central Bank.	Promotion to junior Officer's Rank.	32/1 Mahesh Barik Lane, Calcutta-II.
22.	Shri Bisweswar Sen	Do.	Do.	5, Mohanbagan Lane, Calcutta.
23.	Shri Chandra Bhusan Tewari	Do.	Do.	47, Sitalatala Lane, Calcutta.
24.	Shri Sukumar Mallick	Central Bank of India.	Termination of Employment	8, Mukhtaram De Lane, Howrah.
25.	Shri Ravi Kumar Chatterjee	Do.	Do.	C/o Shri Girindra Kumar Chatterjee, Advocate, Sir Bjoy Chand Road, Burdwan.
26.	Shri S. K. Chatterjee	Model Bank of India.	Payment of Bank's contribution to the provident fund.	Ramporhat P. O., Distt. Birbhum.
27.	Shri Adhir Ranjan De	Hindustan Commercial Bank.	Dismissal from service.	3/2, A, Amharst Street, Calcutta.

[No. LR. 103(89)I.]

P. S. EASWARAN, Under Secy.

New Delhi, the 7th August, 1953

S.R.O. 1580.—In pursuance of clause (1) of article 239 of the Constitution, the President hereby directs that the Chief Commissioners of Delhi and Bhopal, shall, subject to the control of the President and until further orders, discharge the functions of the Central Government under the Minimum Wages Act, 1948 (XI of 1948) in so far as such functions relate to the fixation of minimum rates of wages payable to employees employed in stone breaking or stone crushing operations carried in any mine situated within their respective States.

[No. LWI-24(128)I.]

S.R.O. 1581.—In exercise of the powers conferred by the clause (1) of article 358 of the Constitution, the President hereby entrusts to the Governments of Rajasthan, Travancore Cochin and Saurashtra, with their consent, the functions of the Central Government under the Minimum Wages Act, 1948 (XI of 1948), in so far as such functions relate to the fixation of minimum rates of wages in respect of employees employed in stone breaking or stone crushing operations carried on in any mine situated within their respective States.

[No. LWI-24(128)II.]

P. N. SHARMA, Under Secy.

New Delhi, the 8th August 1953

S.R.O. 1582.—In exercise of the powers conferred by sub-section (1) of section 13 of the Employees' Provident Funds Act, 1952 (XIX of 1952), the Central Government hereby appoints Shri B. K. Das and Shri S. C. Chatterjee, Superintendents of the Accounts Office, Employees Provident Fund Scheme, West Bengal, to be Inspectors for the purposes of the said Act and of any Scheme made thereunder in relation to a factory engaged in a controlled industry or in an industry connected with a mine or an oil-field and directs that the said Inspectors shall exercise jurisdiction throughout the State of West Bengal.

[No. P.F. 516(147).]

S.R.O. 1583.—In exercise of the powers conferred by the sub-section (1) of section 13 of the Employees' Provident Funds Act, 1952 (XIX of 1952), the Central Government hereby appoints Shri J. Benjamin, Superintendent, Accounts Office, Employees' Provident Funds Scheme, Bombay, to be an Inspector for the whole of the State of Bombay for the purposes of the said Act and of any Scheme made thereunder in relation to a factory engaged in a controlled industry or in an industry connected with a mine or an oilfield and directs that the said Inspector shall exercise jurisdiction throughout the State of Bombay.

[No. PF 516(154).]

N. M. PATNAIK, Dy. Secy.

New Delhi, the 8th August, 1953

S.R.O. 1584.—In exercise of the powers conferred by section 7 of the Industrial Disputes Act, 1947 (XIV of 1947), the Central Government hereby constitutes an Industrial Tribunal with its headquarters at Calcutta consisting of a single member, namely, Shri C. Bhaktavatsala Naidu, for the adjudication of industrial disputes that may be referred to it under section 10 of the said Act.

[No. L.R. 60 (180).]

ORDER

New Delhi, the 10th August 1953

S.R.O. 1585.—Whereas the disputes specified in Schedule I and Schedule II hereto annexed were referred to the Industrial Tribunal at Calcutta, consisting of a single member, namely, Shri Kartar Singh Campbell-Puri.

And whereas the services of Shri Kartar Singh Campbell-Puri, have ceased to be available,

Now, therefore, in exercise of the powers conferred by clause (c) of sub-section (1) of section 10 of the Industrial Disputes Act, 1947 (XIV of 1947), the Central Government hereby refers the said disputes for adjudication to the Industrial Tribunal, Calcutta, consisting of a single member, namely Shri C. Bhaktavatsala Naidu constituted by the notification of the Government of India in the Ministry of Labour No. LR-60(180) dated the 8th August 1953.

SCHEDULE I

Parties to the Dispute (1)	Particulars of the Dispute (2)
Industrial dispute existing between the Bombay Mutual Life Assurance Society Ltd., Calcutta and their workmen at Calcutta.	<ol style="list-style-type: none"> Whether retrenchment of about fifty temporary workmen is justified and if so, what retrenchment compensation, if any, should be paid. Whether temporary employees who have completed six months service should be made permanent with retrospective effect from date of appointment and whether on confirmation, they will be entitled to any arrears of differences of salary and dearness allowance from the date of appointment. Whether the whole or any part of the service rendered by the workmen under the Management of the Chief Agents, Dastidar and Sons, should count as service under the Bombay Mutual Life Assurance Society Ltd.

SCHEDULE II

Industrial Dispute existing between the Lloyds Bank Ltd., Calcutta and their workmen

PART I

Serial No.	Name of workmen.	Designation	Where last employed
1	Shri Sankarl Ghose	Clerk	Lloyds Bank Limited, 29, Netaji Subhas Road, Calcutta.
2	Shri Ramananda Bhaduri	Do.	Do.
3	Shri Kartic Majumdar	Do.	Do.
4	Shri Kamal Halder	Do.	Do.
5	Shri Shyama Sarcar	Do.	Do.
6	Shri Kalikinkar Shom Chowdhury	Do.	Do.
7	Shri Biswaswar Balai Ghose	Do.	Do.
8	Shri Nemai Dutta	Do.	Do.
9	Shri Kuruna Ghosal	Do.	Do.
10	Shri Nayananda Goswami	Do.	Do.
11	Shri Monoranjan Bose	Do.	Do.
12	Shri Sudhin Chakrabarti	Do.	Do.
13	Shri Sachin Chatterji	Typist	Do.
14	Shri Nirmal Saha	Do.	Do.
15	Shri Santi Mukherji	Do.	Do.
16	Shri Samiran Bose	Do.	Do.
17	Shri Khitish Bose	Do.	Do.
18	Shri Sita Ram	Bearer	Do.
19	Shri Ram Josh Roy	Do.	Do.
20	Shri Jang Bahadur	Do.	Do.
21	Shri Ramritich Ram	Do.	Do.
22	Shri Kanu Guhait	Sweeper	Do.
23	Shri Robin Chatterjee	Clerk	Lloyds Bank Limited, 41, Chowringhee, Calcutta.
24	Shri Upen Talapatra	Do.	Do.
25	Shri Santosh Kundu	Do.	Do.
26	Shri Asoke Ghose	Do.	Do.
27	Shri Premananda Bhaduri	Do.	Do.
28	Shri Hiranmoy Lahiry	Do.	Do.
29	Shri Duragananda Sarcar	Do.	Do.
30	Shri Sudhir Bhattacharji	Do.	Do.
31	Shri Hare Krishna De	Do.	Do.
32	Shri Biren Roy Chowdhury	Do.	Do.
33	Shri Joytish Sarcar	Do.	Do.
34	Shri Kedar Singh	Bearer	Do.
35	Shri Bhrigubans Pande	Do.	Do.
36	Shri Ramadhar Upadhyay	Do.	Do.
37	Shri Janaki Singh	Do.	Do.
38	Shri Gambhir Singh	Do.	Do.
39	Shri Gobind Acharya	Do.	Do.
40	Shri Ramdeo Singh	Do.	Do.

PART II

Whether the termination of the services of the workmen specified in Part I was justified and if not, whether they should be re-instated in service and/or granted any compensation.

[No. L. R. 60 (180)]

N. C. KUPPUSWAMI, Dy. Secy.